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Impact of a Policy, Systems, and Environmental Intervention of Low-Income 5th Grade Students' Self-Efficacy

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IMPACT OF A POLICY, SYSTEMS, AND ENVIRONMENTAL INTERVENTION OF
LOW-INCOME 5TH GRADE STUDENTS' SELF-EFFICACY

BY

SABRINA G. HAFNER

THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF
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IN
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MASTER OF SCIENCE
OF
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ABSTRACT

Objective: Evaluate the impact of an 8-lesson Policy, Systems, and Environment (PSE) nutrition intervention on students' asking self-efficacy for fruits and vegetables (FV's).

Study Design: Quasi-experimental mixed-methods design.

Participants/Setting: N=142 (n=85 intervention, n=57 control) 5th grade students from urban, low-income elementary schools.

Intervention: Intervention group received an intervention designed to empower students in making changes to their food environment.

Main Outcome Measures: Self-reported asking self-efficacy for fruit and vegetables, FV and PSE knowledge, and FV consumption and variety. Semi-structured focus groups assessed students' self-efficacy.

Analyses: Analysis of covariance, Wilcoxon signed-rank test, paired t-tests for survey data. Thematic analysis for focus group data.

Results: There were no significant differences in school and home self-efficacy between or within groups. There were no between group differences in other variables. There was a significant increase in FV knowledge and a decrease in vegetable consumption and variety within the intervention group ($p < 0.05$). Fruit consumption significantly increased ($p < 0.01$ in both groups). Themes that emerged in pre- and post- focus groups were: *self-efficacy* in asking for a favorite FV, *outcome expectation* as a result in asking, *identifying strategies* in increasing FV frequency, and *helping at home* with food preparation. At post-intervention, students better described their feelings of self-efficacy compared to pre-intervention. Students at post positively reflected on the intervention in that they enjoyed being involved in change.

Conclusion and Implication: There were no significant differences in self-efficacy and PSE knowledge assessed by surveys. Focus group data revealed that students who received the PSE intervention perceived positive changes on self-efficacy in asking for FV and that they understood school and home PSE. The discrepancy between assessment methods needs to be expanded in future research.

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PREFACE

This thesis was prepared in manuscript format following the author guidelines for *The Journal of Nutrition Education and Behavior*. After submitting this thesis, the manuscript may be submitted for publication.

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MANUSCRIPT

**“Impact of a Policy, Systems, and Environmental Intervention of Low-Income 5th
Grade Students’ Self-Efficacy”**

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INTRODUCTION

Most children, especially low-income children, do not meet the recommended guidelines for 1 ½ - 2 cups of fruit and 1 ½ to 3 cups of vegetables per day.^{1,2} In the long-term, meeting these recommendations can decrease a child's risk for chronic diseases such as cardiovascular disease, hypertension, and some cancers, and can assist in weight management across the lifespan.³⁻⁵

To improve children's dietary quality, the Center for Disease Control and Prevention recommended that children should take charge of making healthy dietary choices.⁶ However, self-efficacy, a child's perceived confidence that he/she is capable in executing a specific behavior,⁷ is a characteristic that children without guidance often lack.⁸ Therefore, nutrition interventions should equip children with skills to increase self-efficacy with a goal of empowering them to make healthier dietary choices for themselves.

Some school-based interventions that involve nutrition Policy, Systems, and Environmental Change (PSE) are designed to empower students to change their food environment.⁹⁻¹¹ Activities may include students writing a letter to the school principal about a vegetable they like or encouraging students to interview parents to obtain recipes that include fruits and vegetables (FV's).^{10,11} Empowering students to voice their opinions and partake in the decision-making process may increase their self-efficacy to make changes in day to day scenarios.¹²

EMPOWER was a pilot PSE intervention that included 312 low-income 5th grade students.^{9,10} Although this program was effective in increasing PSE and FV knowledge, there were no significant changes in FV consumption and this pilot study did not directly measure student self-efficacy.¹⁰ However, school staff reported an increase in students'

self-efficacy in interviews and focus groups, and students recalled making positive dietary changes as a result of the intervention such as asking for vegetables at home.⁹ Though PSE interventions such as EMPOWER aimed to empower students in changing their food environment, the effectiveness of PSE interventions in regard to self-efficacy is limited, especially with 5th grade students.¹¹

Implementing PSE programs geared toward 5th grade students are ideal because they are nearing the transition period where they explore their independence over food selection and consumption in their immediate environment and in social settings.¹³ Moreover, 5th grade students have the cognitive skills to have meaningful participation in focus groups, which is necessary when exploring factors that are difficult to assess in surveys.¹³ Thus, examining change in 5th students' self-efficacy as an outcome of PSE interventions, both quantitatively and qualitatively, is needed.

This mixed-methods study examined changes in self-efficacy among urban, low-income, pre-dominantly Hispanic 5th-grade students as an outcome of a school-based, eight-lesson, PSE intervention, Students Take Charge! (STC). The first aim was to determine if there was an increase in self-efficacy in the intervention school more than control school assessed through surveys. The second aim was to evaluate factors that contribute to students' self-efficacy assessed through focus groups pre- and post-STC intervention. The third, exploratory aim, was to assess whether there was an increase in students' FV and PSE knowledge and FV consumption compared to the control group evaluated through surveys.

METHODOLOGY

Overview

The 2x2 quasi-experimental mixed-method study used quantitative and qualitative data from STC. This study was approved by the University of Rhode Island Institution Review Board. Students Take Charge! (STC) was an eight-lesson in-school PSE-intervention conducted by Rhode Island Supplemental Nutrition Assistance Program Education (SNAP-Ed). This study involved 5th grade students from two low-income elementary schools in Providence, Rhode Island. The two schools were preselected for this study by an established relationship between SNAP-Ed and the Providence Public School's wellness director. Following selection for the study, schools were randomly chosen to be either the intervention or control group.

Setting and Participants

A total of 184 5th grade students participated in the intervention (n=108) and control schools (n=76). However, only students who completed the self-efficacy survey in its entirety were part of the analytic sample. At pre-intervention, 23 students did not complete the self-efficacy survey. At post-intervention, six students did not complete the self-efficacy survey. A total of 13 students did not complete the surveys at both pre- and post-intervention. Thus, the final analytic sample was 142 students (intervention n = 85, control n = 57) (Table 1).

Within the city school district, 58.9% of the student population identified as Hispanic, 16.8% identified as black, and 15.3% identified as white.¹⁴ Moreover, a total of 87% of the students in Providence were eligible for free or reduced-fee lunch, meaning that their families are with incomes below 185% of the poverty level.¹⁴ The Rhode Island Department of Education's Community Eligibility Provision allows schools in high poverty areas to provide free lunch to all children enrolled in those schools; Providence

schools meet this qualification as 87% of students were eligible for free or reduced-fee lunch.^{15,16}

Intervention

Students Take Charge!, an eight-lesson school-based PSE-intervention, was delivered by trained Supplemental Nutrition Assistance Program Education (SNAP-Ed) nutrition educators. This intervention was based on a pilot Extended Food and Nutrition Education Program (EFNEP) program conducted in 2016,^{9,10} but was modified to meet SNAP-Ed goals. STC focused on providing students opportunities to influence nutrition PSE through participating at the school Wellness Committee meetings, conducting caretaker interviews, participating in a recipe contest, taste-testing recipes, marketing activities, and influencing the school menu cycle (Table 2). All of these opportunities aligned with the SNAP-Ed goal of encouraging students to consume more FV's. At the end of each 30-minute lesson in the students' classrooms, a family newsletter was sent home that included nutrition education and a healthy recipe to encourage parents and students to incorporate FV's at home (e.g. educating on how different colors of FV's are beneficial and to encourage their children to eat a variety of FV's throughout the week). The home component of this intervention required students to choose a favorite recipe with their caretakers that had a FV's as the main ingredient. Upon submission, nutrition educators and the school food service company, Sodexo, determined recipe eligibility and deemed whether the recipes could be reproducible for mass production in school. Two recipes were chosen to be tasted-tested by 5th grade students. Students tasted and voted for the recipe they wanted to see featured on the menu on recipe-tasting day. On recipe-

tasting day, the whole school had the opportunity to taste-test the winning recipe and vote if they would eat it again or not.

Study Procedure

Data collection

Surveys were distributed to each participating 5th grade classroom at the intervention and control school at baseline, before the first lesson, and follow-up, after the last lesson. Students first completed demographic information on the front cover of the survey packet (age, name, gender, language spoken at home, and their racial identity) at baseline. Following the instructions read aloud by the SNAP-Ed educator in English, students completed surveys pertaining to self-efficacy (in asking for FV's at home and school), knowledge (FV and PSE knowledge), and FV consumption and variety. All surveys were given on paper in both Spanish and English at pre- and post-assessment. The control group data was collected within a two-week period of intervention school's group data collection for pre-and post-assessments following the same procedures as the intervention school.

Instruments

For the first aim, the self-efficacy survey was developed by SNAP-Ed Educators as part of STC. The asking self-efficacy scale was adapted from a validated and reliable, 11-item, instrument assessing asking and shopping self-efficacy (Cronbach $\alpha = 0.80$),¹⁷ which had been tested among 9- to 11-year old low-income students. The original 11-items were revised in order to fit the needs for STC; five items were removed that did not pertain to self-efficacy in asking for FV's at home. Four items related to asking behavior at school were added. Three cognitive interviews were conducted to ensure clarity,

comprehension, and suitability with low-income 5th grade students from a school that did not participate in the study but had similar demographics as the participating schools. Three items that confused students were removed. Lastly, “fruit” and “vegetable” were underlined in two places to help students focus on the subject of the statement. Seven items were included in the STC instrument, which focused on objectives important in this study (five questions pertaining to home and two questions pertaining to school). The survey used the original response categories, “I disagree very much,” “I disagree a little,” “I am not sure,” “I agree a little,” and “I agree very much” (Appendix D).

After completion of cognitive interviews, a different sample of urban 5th graders completed the 7-item self-efficacy instrument. Exploratory factor analysis using Maximum Likelihood extraction, Oblimin with Kaiser Normalization rotation, found a two-factor solution (Goodness-of-fit Chi Square 15.1, $p < 0.01$; 56% of variance explained) with two scales, home and school. The 4-item home scale had factor loadings 0.64-0.79 with a Cronbach’s $\alpha = 0.79$ (one item from the 7-item scale “ask for fruit at dinner” failed to load adequately thus was deleted). The 2-item school scale had factor loadings 0.60-0.99 with a Cronbach’s $\alpha = 0.74$. One item from the original 7-item scale “ask for fruit at dinner” failed to load adequately thus was deleted from the final 6-item, 2-factor self-efficacy scale used for data analysis in this study.

For the exploratory aim, the PSE knowledge survey was developed by nutrition educators at SNAP-Ed who determined it had face validity. The knowledge survey comprised of two assessments; three-items that examined students’ knowledge of FV recommendations and three-items that evaluated knowledge of PSE. The FV knowledge survey had been previously developed with participants of this age group (Cronbach’s α

= 0.77).¹¹ For analysis, each item was scored as correct (1) or incorrect (0) (range 0-3).

The consumption survey also had two components, which assessed students' FV consumption recall from the day prior (e.g. "How many fruits (vegetables) did you eat yesterday? Do not include fruit juice (Do not include French Fries)"). Response categories were 0 to 5 or more (scored as 5) for fruit and for vegetables. FV variety in general was assessed (e.g. "Do you eat more than one kind of fruit (vegetables) each day?"). The consumption survey used in this study was adapted from a previously validated instrument.¹⁸ For analyses, response categories ranged from 0 to 5 (0 = no FV, 5 = five or more) for consumption and 1 to 4 for variety (1 = not often to 4 = every day).

Student Focus Groups

For the second aim, the researcher conducted two pilot focus groups, a total of eight students of similar demographics, in order to create the final moderator guide. Focus groups questions asked students about their favorite FV's followed by questions about who controls access to that food, asked students to identify strategies for increasing frequency of FV's, and how to change the items offered at home (Table 2). Similar questions were asked about FV's at school. The first pilot focus group was 10 minutes long and students responded in short sentences. Thus, revisions were made increasing the number of open-ended questions. During the second pilot focus group, the session was 40 minutes long and students were more engaged with school questions than home questions. Thus, the final moderator guide was written to ask school-based questions first, followed by home-based questions. Two questions were added about what they think an adult would do as a result of their request for FV's and about a student's comfort level in asking an adult for their favorite FV's, since these types of responses were raised

in the second pilot focus group and pertained to self-efficacy. These changes were finalized for the pre-intervention focus groups at the intervention school (Appendix E).

Focus groups were conducted twice with students at the intervention school; eight focus groups at approximately one-month pre-intervention and eight focus groups approximately one-month post-intervention. Each focus group consisted of three to four-5th grade students. The teacher selected the students based on availability and willingness to participate. The primary researcher moderated the focus groups and the assistant moderator, a SNAP-Ed educator who has previously been trained in focus group research, took notes of the discussion. The focus groups, on average, were 31 minutes long and conducted at an empty waiting area in school where it was quiet and convenient. The assistant moderator was instructed to write all responses from each focus groups on paper as close to verbatim as possible.

Several changes were made for focus groups post-intervention. To enhance engagement as well as to provide a visual representation of their response regarding comfortability in asking an adult for FV's, a comfortability scale was added to the Post-Intervention Moderator Guide. The scale ranged from one end of the scale that indicated "No way, I'm not comfortable at all" and was rated as 0% comfortable, "Maybe, I'm sort of comfortable" and was rated as 50% comfortable, to the other end of the scale that indicated "Yes, let's do it. I'm very comfortable" and was rated as 100% comfortable, with an option to put the arrow between each response (Appendix F). A question reflecting students' experiences of STC was also asked. This allowed students to share and reflect skills and knowledge gained and whether they had a positive experience or not (Appendix F).

Data Analysis

For the first and exploratory aims, data were analyzed in SPSS 23.0 (SPSS Inc., Chicago IL). Continuous data were normally distributed. Baseline differences between groups was assessed by Chi Square for categorical variables and independent t-tests for continuous data. The reliability of each factor of school and home self-efficacy questions was assessed. The four-home self-efficacy questions were found to be reliable (Cronbach's $\alpha = 0.72$). The two-school self-efficacy questions had lower reliability (Cronbach's $\alpha = 0.60$). ANCOVA was used to control the effect of clustering for class comparing intervention and control over time for self-efficacy at school and home, FV and PSE knowledge, and FV consumption and variety. All within group change was assessed using paired t-tests. For all tests, statistical differences were set at $p < 0.05$.

For the second aim, thematic analysis was used to identify emerging themes and patterns of the focus groups data. This iterative process allowed the primary researcher to focus on identifying meaning across the dataset with flexibility, meaning that it is not bounded to theoretical commitments and may allow for interpretation.¹⁹ The questions were coded a priori to organize the data. The primary researcher initially reviewed and analyzed the pre-intervention focus group transcript in Microsoft Excel, and findings from each focus group question were summarized, categorized, then finally made into themes. To ensure trustworthiness, an outside graduate-student reviewer coded all pre-intervention focus group transcripts in Microsoft Excel. Instructions on coding were created by the primary researcher and were given to the outside reviewer (Appendix G). The primary researcher and the outside reviewer then identified and reported preliminary codes²⁰ by independently reading the transcripts on Microsoft Excel and labeling each

idea or phenomenon in the text (Appendix H).²¹ The primary researcher and outside reviewer then compared codes. Initially there was a 69% agreement. A third reviewer independently coded all items that did not agree. The third reviewer agreed with the primary reviewer 95% of the time for all codes in conflict. Final codes were based on the third reviewer decisions. The primary researcher solely coded post-intervention focus group data due to high agreement on the pre-intervention focus group data (Appendix I).

In the second phase of analysis, the primary researcher reviewed and analyzed the pre- and post-intervention focus group transcripts with the use of two matrices on Microsoft Word. The first matrix summarized within group responses and the second matrix summarized between group responses.²² Findings were then categorized and made into themes. The themes were further refined after reading the notes several times to ensure that all pertinent information was coded, and no information was overlooked, which then led to the final identification of themes.

QUANTITATIVE RESULTS

There were no significant differences between groups by age, gender, or ethnicity at baseline (Table 3). The average age of students from both groups was 10.5 years, 46% of the students were female, and 70% of students from the intervention school and 60% of students from the control school identified as Hispanic (Hispanic or Non-Hispanic defined by students reporting whether or not they speak Spanish at home).

Self-efficacy measured by pre- and post-intervention surveys was analyzed using ANCOVA while adjusting for class. There were no between or within group differences in school self-efficacy. Because coefficient- α for school self-efficacy was low, school self-efficacy was explored as two single items, yet results remained the same (data not

shown). There were no significant changes in home self-efficacy between or within groups (Table 4).

Knowledge measured by pre- and post-intervention surveys was analyzed using ANCOVA while adjusting for class. FV knowledge were not statistically different between groups but did significantly increase within the intervention group (pre 0.27 ± 0.24 , post 0.34 ± 0.31 , $p < 0.05$). Knowledge of PSE did not change between or within groups (Table 4).

Fruit and vegetable consumption and variety measured by pre- and post-intervention surveys were analyzed using ANCOVA while adjusting for class. Fruit consumption did not significantly change between groups, but significantly increased both within the intervention by 0.5 fruits ($p < 0.01$) and the control group by 1.0 fruits ($p < 0.01$). Vegetable consumption did not significantly change between groups, but significantly decreased by 0.5 vegetables within the intervention group ($p < 0.001$). For consumption variety, there were no significant difference between or within groups in regard to fruit variety. Moreover, there was no significant between group difference in vegetable variety at post, but there was a significant decrease in vegetable variety among students in the intervention group from pre- to post-intervention by 0.2 categories ($p < 0.05$). (Table 4).

QUALITATIVE RESULTS

Pre-Intervention Findings

A total of 32 students participated in eight pre-intervention focus groups. Four themes emerged throughout focus group discussions: *self-efficacy*, *outcome expectations*, *identifying asking strategies*, and *helping at home with food* (Table 5).

Students ranged from reporting having high to low *self-efficacy* in terms of asking for their favorite FV's at school. Positive *outcome expectations* as a result of asking for FV's such as students thinking that an adult would listen to their suggestion were mainly based on the relationship and positive rapport between students and a school adult. Negative *outcome expectations* were based on perceived barriers such as time and money and negative rapport with an adult. At home, almost all students had high *self-efficacy* in asking for their favorite FV's at home and had overall positive *outcome expectations* as a result of asking for FV's. A few students had reported negative *outcome expectations* because adults at home would be busy or did not have enough money.

Students expressed competencies such as *identifying strategies* in asking for their favorite FV's at school and home as well as *helping at home in food preparation*. Students overall were split in being able to make specific requests at school and home. Many were hesitant to ask for their favorite FV's at school because they perceived that they did not have prior experiences or skills in asking non-family adults. At home, students would either ask an adult at home to either go to the store or some would ask to accompany the adult to store and buy their favorite FV's. In terms of *helping at home with food*, some students remembered specific times they helped prepare a meal with FV's either independently or with the help of family members, but many students reported general tasks in preparation such as cutting, washing, and cooking. Some did not help with food preparation at home.

Post-Intervention Findings

Thirty students participated post-intervention focus groups. The same themes from the pre-intervention focus groups emerged: *self-efficacy*, *outcome expectations*,

identifying asking strategies, and helping at home (Table 7). In addition, most of the students described what they enjoyed and learned from *STC* and incorporated *STC* activities and related knowledge into their responses throughout the focus groups.

Almost all students had high self-efficacy in asking for their favorite FV's at school (almost all above 50% comfortable based on the comfortability scale, which was only utilized during post-intervention focus groups). Students were more comfortable asking an adult at school with the support from friends (95-100% comfortable). Students had positive *outcome expectations* because of their positive rapport with an adult at school (See Table 6). Some students had negative outcome expectations because they thought a school adult such as the lunch lady may be busy. At home, almost all students had high self-efficacy in asking for their favorite FV's (almost all were 100% comfortable) and had positive *outcome expectations*. Some students had negative *outcome expectations* because they perceived money as a barrier at home.

Students expressed competencies such as identifying specific strategies in asking for their favorite FV's at school and home and helping at home in food preparation. Most students would ask for their FV specifically, and some reported that they incorporated concepts learned from *STC* such having students vote on recipes to add to the school menu. At home, students would either ask an adult to go to the store to get their favorite FV's or asked to go to the store with them. Many agreed that going to the store with them will successfully get them what they want. Students reported helping at home with food preparation such as making specific meals at home either independently or with family members, and some even recalled making SNAP-Ed recipes such as the Vegetable Lasagna. Students also recalled generally preparing FV's such as chopping, washing, and

cooking. When asked what they thought of STC, students reported they enjoyed voting, getting their classmates to try new foods, and socializing with everyone in the cafeteria. Students also learned techniques such as if they do not like a FV they could add something to make it taste better such as a dip from the salad bar.

DISCUSSION

There is a need to implement and evaluate effective interventions that empower children to develop skills and increase their self-efficacy in asking for FV's. The purpose of this mixed-method study was to assess how self-efficacy changed among low-income pre-dominantly Hispanic 5th grade students after the implementation of STC. Based on the six-item instrument on asking self-efficacy, there were no changes in self-efficacy. However, focus groups revealed that students at post-intervention had higher self-efficacy in asking for FV's at school and home, and had overall positive outcome expectations about asking after STC. Students were also able to identify specific asking strategies and expressed competency in helping at home with food. Although students in the intervention school did not increase PSE knowledge assessed by knowledge surveys, they were able to demonstrate specific understanding of systems and environments in focus groups. Future implications will be discussed.

There were no significant changes in self-efficacy at school and home in this study. These findings were similar to results of *Gimme 5*¹¹ finding no change in asking and shopping self-efficacy in the home environment. On the other hand, Keihner et al.¹⁷ found a significant but relatively small between group effect for a similar scale ($p = 0.04$) with a sample of 988 in *Power Play!* The authors attributed greater effect than *Gimme 5*

due to greater intervention delivery fidelity. Intervention dose could have impacted the current STC's effect on self-efficacy. Keihner et al.¹⁷ also had a more intense intervention dose of 10, 50-minute sessions whereas the current study, which included 8, 30-minute sessions. However, the current study was similar to Keihner et al. in that professional nutrition educators delivered the intervention, whereas *Gimme 5* was delivered by teachers. In addition, Keihner et al. included 11-items in their survey for asking, shopping, and eating self-efficacy, whereas the current study included only 6-items in the self-efficacy survey pertaining to only self-efficacy asking for FV's. Lastly, it is important to note that this current study found that home self-efficacy was already high at baseline (intervention 4.3 ± 0.8 and control 3.9 ± 1.0), which suggests a ceiling effect. The home self-efficacy scale used in this study had little room to improve since the scale maximum was 5.0. Future research may be needed to develop asking self-efficacy scales to better assess students' asking self-efficacy associated with PSE interventions.

On the other hand, focus groups appeared to capture themes related to self-efficacy in this study. About half the students in pre-intervention focus groups had high self-efficacy in asking for FV's at school, but almost all students had high self-efficacy at post. For example, students at post-intervention focus groups acknowledged that a school adult may be too busy to listen to their suggestions but were able to identify specific strategies learned in STC and expressed greater confidence that they could communicate their needs to the adult. Lepe et al.⁹ also found that self-efficacy emerged as a theme in post-intervention focus groups, in which a majority of school staff indicated that they felt there was an increase in students' self-efficacy in asking for FV's at school and home

after their PSE intervention. Students also expressed high self-efficacy in the presence of peers, which was expressed when using the confidence scale. Almost all students expressed that they would be comfortable asking an adult at school for their favorite FV's in the presence of other students. This finding also emerged in focus groups conducted by Molaison et al.²³ Future studies should explore the interaction between self-efficacy and social support in this age group.

Although almost all students in post-intervention focus groups had high self-efficacy in asking for FV's at home and had positive expectations as a result, some students had negative expectations and expressed perceived barriers such as time and money that was out of their control. Molaison et al.²³ also found, in focus groups with 10-13 year old, low-income, African American children, that children perceived they were not able to control their environment in regard to making decisions about what they ate at home (e.g. *"My momma does the cooking, and she chooses"*).²³ Students were able to provide a realistic assessment on what goes on at home, which may have been difficult to assess through surveys as these unique responses were students' personal experiences. This perceived negative expectation by a few students in getting FV's at home may mean that they are only empowered to a certain point as societal barriers such as poverty are out of their control.

Students were able to identify strategies for increasing FV frequency at school and home. Evans et al.²⁴ found similar focus group findings with 10-14-year-old low-income students. Barriers they perceived in consuming FV's were lack of availability of healthy foods, easy access to unhealthful foods, social pressure to eat unhealthful foods, and lack of variety as well as unappealing items at school lunch. However, students

suggested that parents and schools could make healthy foods more appealing and available. They noted that including students in the decision-making process was a strategy for increasing FV consumption (e.g. *“oh, like 3 times a week they should let us decide what we want to eat instead of them always picking.”*²⁴) In this current study, SNAP-Ed educators were able to teach students asking strategies in STC, and students reported some of these strategies into their responses in post-intervention focus groups. Even though students in both pre and post identified strategies in increasing FV frequency at school and home, students in post-intervention focus groups were able to incorporate more specific strategies such as voting, writing a persuasive letter, or accompanying an adult to the grocery store.

Students at pre- and post-intervention focus groups were able to report involvement in home food preparation, which may be related to cultural and socioeconomic reasons. Keim et al.²⁵ found that 8-11 year old Mexican American children were able to prepare FV's whereas their Caucasian peers expressed that they would rather have their parents do the preparation. Kirby et al.²⁶ also noted that children from low-income families had more responsibility for preparing food themselves when compared to children from higher-income families. Many students in this current study had experience of helping adults prepare food; however, as found by Kirby et al., some students reported having to prepare meals for their family. Students in this current study received easy FV recipes during STC; ones that are simple for children to prepare by themselves with adult supervision. Some students mentioned making those recipes at home such as the Vegetable Lasagna. Interventions might consider including a cooking component, so children are exposed to making FV-based dishes to encourage cooking

them at home. Future PSE interventions should also encourage schools to incorporate more ethnic food items in school menus appropriate for this predominantly Hispanic-population.

Students in post-intervention focus groups discussed their evaluation of STC. Students mentioned what they liked about STC such as being able to vote, interact with other students in the cafeteria, convincing them to try a FV dish, and seeing a student's recipe implemented in the district wide lunch menu. Lepe et al.⁹ also had students evaluate the PSE program by having them recall what they learned and what they liked or disliked about the intervention and found that students enjoyed creating posters advertising FV's, the interactive games and activities, and taste-testing recipes. Heim et al.²⁷ also asked students through open-response questions on paper-surveys what they liked most about their program and found students enjoyed harvesting FV's to eat, making snacks, and taste-testing different FV's. It is important that interventions assess students' experiences of interventions for future program developments.

For the exploratory aim, FV knowledge increased within the intervention group, but there was no between group difference and no difference in PSE knowledge. These findings were different than findings from Goodwin et al.¹⁰ who found increases in both FV and PSE knowledge. This may be due to the differences in the curriculum of EMPOWER and STC. Changes from EMPOWER to STC included reducing the number of curriculum weeks from 10 to 8 weeks, reducing the content of each class to 30 minutes or less, and having dietitians teach STC instead of paraprofessionals. Changes to the curriculum could have affected student scores on the knowledge surveys. However, in focus groups, students at post were able to express knowledge of systems such as "asking

Sodexo” and had a better grasp on environmental change such as voting on recipes for the salad bar. Future interventions should align the content of the instruments with the intervention’s curriculum.

Fruit consumption significantly increased in both groups, while vegetable consumption significantly decreased in the intervention group. In addition, vegetable variety significantly decreased among students in the intervention group. These results may be due to different items being served at different time points within and between schools.²⁸ Providing FV’s that students prefer may have led to changes in consumption.³⁰ Weisfeld et al.²⁸ assessed FV consumption using a digital photography method in the population involved in the STC intervention, and found the intervention and control schools faced challenges in meeting the School Meals Initiative for Healthy Children (SMI) standards. Moreover, Fox et al.²⁹ assessed findings from the School and Nutrition Dietary Assessment Study (SNDA-IV) across schools nationally in 2010 and found that only 14% of schools offered (students self-selected food items) and 7% served (pre-plated) met the SMI standards. Future interventions should not only include activities such taste-tests of different FV’s to increase students’ preferences of FV’s but include an intervention for school food service workers.

Strengths and Limitations

STC was one of the few PSE interventions that included children in influencing the nutrition environment at school. STC aimed to improve self-efficacy, nutrition-related knowledge, and FV consumption among urban low-income pre-dominantly Hispanic 5th grade students. This study had strengths such as that it used a mixed-method approach, included pre- and post-focus groups to better assess change in students’ experiences

associated with self-efficacy, and also included a control group with students of similar demographics for comparative purposes.

There were several limitations that need to be addressed. First, the six-item self-efficacy survey may not have been sensitive enough to detect an intervention effect, and the four-item home scale was high at baseline, suggesting a ceiling effect. Moreover, Cronbach's alpha for the school self-efficacy questions was relatively low indicating borderline reliability; although, when items were assessed separately, self-efficacy results remained non-significant. Another limitation was that this study did not receive permission to audio-record focus groups, the reviewer relied on the assistant moderator's notes which were not verbatim. A third limitation was the selection process for focus group participation was limited to only English-speaking students, which may have excluded viewpoints from children who only spoke Spanish. The two classrooms with children who were in English as a Second Language programs chose not to participate in STC. Lastly, even though the study included a validated FV consumption and variety survey, they may not have been valid tools to accurately measure FV consumption in this population as children tend to under- or over-estimate using self-report tools. In addition, differences in menu options within and between schools could have affected results.

IMPLICATIONS FOR RESEARCH AND PRACTICE

PSE programs such as STC can address barriers to change found in focus groups in order to improve nutrition-related self-efficacy, knowledge, and consumption. However, it may be necessary to improve SNAP benefits and other related assistance programs to help address such societal barriers such as inadequate money for food. In addition, future interventions should consider using instruments that include more items

that directly pertain to the interventions' curriculum that may be able to detect change. Lastly, including a parent component of the program should be considered in future PSE interventions where parents are informed about what their children have learned during each lesson and can incorporate what students have learned into the home environment. These additions to STC may help improve students' self-efficacy as they may be better supported by their parents. It is important that future studies continue to improve students' nutrition-related behaviors and attitudes that will hopefully follow them into adulthood.

Table 1. Participants of STC and Analytic Sample

184 Students at Pre-Intervention	
-19 students missed pre	-4 students missed 1 question
↓ ↓	
161 Students at Post-Intervention	
-5 students missed post	-1 student missed 1 question
↓ ↓	
155 Students Altogether	
13 students missed all	
↓ ↓	
Analytic Sample: 142	
↓ ↓	
Intervention n=85, Control n=57	

Table 2. Students Take Charge Lesson Outline

Lesson	Topics
0	Pre-surveys; Facilitate focus groups with teachers, parents, principal
1	MyPlate; Fruits & Vegetables You Enjoy
2	Function of Fruits & Vegetables; Overcoming Barriers
3	Amount of Fruits & Vegetables; Recipe Reading
4	Go, Slow & Whoa Food Groups; Role-Playing Interviewing Adult About Favorite Fruit and Vegetable Recipe
5	Healthy Snack; Taste Testing & Discussions on Slogans; Persuasive Messages
6	Winning Recipe Announced; Make Posters
7	Making Requests and Practice Polling
8	Recap; Complete Post-survey

Table 3. Focus Group Moderator Guide Questions Pre- and Post- Intervention

Domain	Questions
Identify who controls access to food	Let's play a game, who is the first one who can tell me an adult at school (home) you would talk to, to get more of your favorite fruit or vegetable?
Identify strategies for increasing frequency of food	Let's pretend I'm that adult and you are asking me to put FV in the menu more often. What would you say to me?
Identify students' perspective of the outcome of asking to increase frequency of food	<p>What do you think would happen if you asked an adult to put your favorite FV on the menu?</p> <p>How likely is it that they would listen to your suggestion and buy that FV next time they went to the store?</p> <p>How would you feel if they put the item on the menu next week/bought it?</p>
Identify students' comfortability of asking adult for FV	How comfortable do you feel about asking them to put it on the menu?
Changing the menu that is offered/influenced at home	What sort of things do you do to help prepare foods at home?

Table 4. Study Sample Demographics of Fifth Grade Students in Two Schools in Providence, Rhode Island

		Mean±SD	
	Continuous Variables	Intervention (n=88)	Control (n=64)
Child Age	Age (yrs)	10.5 ± 0.6	10.6 ± 0.8
		n(%)	
	Categorical Variables	Intervention(n=88)	Control (n=64)
Gender	Female	45 (47.9%)	33 (45.8%)
Spanish Speaking	Yes	62 (70.5%)	39 (60.9%)
Race ^a	Asian	2 (2.3%)	7 (10.9%)
	African American	20 (22.7%)	14 (21.9%)
	White	10 (11.4%)	11 (17.2%)
	American Indian/Alaskan Native	5 (5.7%)	5 (7.8%)
	Native Hawaiian/Other Pacific Islander	1 (1.1%)	3 (4.7%)
	Other	70 (79.5%)	42 (65.6%)

^aThis question allowed for students to check more than one response.

Table 5. Self-Reported Self-Efficacy, Knowledge, and Consumption Pre- to Post-Policy, Systems, and Environmental (PSE) Intervention

Variables	Group	Pre-Intervention	Post-Intervention	Change	Within (t)	Between (F) ¹
School Self-Efficacy ^b	Intervention (n=85)	3.0 ± 1.2	3.2 ± 1.3	0.2	-1.14	2.5
	Control (n=57)	2.7 ± 1.2	2.7 ± 1.3	0.0	0.22	
Home Self-Efficacy ^c	Intervention (n=85)	4.3 ± 0.8	4.2 ± 1.0	-0.1	0.79	0.19
	Control (n=57)	3.9 ± 1.0	4.0 ± 1.0	0.1	-0.90	
Knowledge of FV ^d	Intervention (n=85)	0.3 ± 0.2	0.3 ± 0.3	0.0	-2.03*	0.15
	Control (n=61)	0.3 ± 0.7	0.4 ± 0.2	0.1	-0.96	
Knowledge of PSE ^e	Intervention (n=85)	0.4 ± 0.3	0.4 ± 0.3	0.0	-0.95	0.74
	Control (n=62)	0.4 ± 0.3	0.4 ± 0.2	0.0	0.58	
Fruit Consumption ^f	Intervention (n=85)	2.7 ± 1.4	3.2 ± 1.0	0.5	-3.0**	0.20
	Control (n=62)	2.0 ± 1.4	3.0 ± 0.9	1.0	-4.8**	
Vegetable Consumption ^f	Intervention	2.0 ± 1.7	1.5 ± 1.4	-0.5	2.9***	1.6
	Control	1.3 ± 1.4	1.1 ± 1.3	-0.2	1.1	
Fruit Variety ^g	Intervention (n=85)	2.7 ± 0.8	2.6 ± 0.8	-0.1	0.35	0.10
	Control (n=61)	2.3 ± 0.9	2.4 ± 0.8	0.1	-1.09	
Vegetable Variety ^g	Intervention (n=85)	2.3 ± 0.9	2.1 ± 1.1	-0.2	2.12*	1.17
	Control (n=61)	2.0 ± 0.9	2.0 ± 0.9	0.0	-0.78	

¹ Adjusted for covariate of class

^bSchool self-efficacy was assessed using the average score of a 2-item scale with response options ranging from 1 (low) to 5 (high)

^cHome self-efficacy was assessed using the average score of a 4-item scale with response options ranging from low 1 (low) to 5 (high)

^dKnowledge of FV was assessed using the average score of a 3-item scale with response options ranging from 0 (incorrect) to 1 (correct). Questions were, “How many fruits (vegetables) should 4th and 5th graders eat each day?” and “How much of a 4th and 5th grader’s plate should be filled with fruits and vegetables

^eKnowledge of PSE was assessed using the average score of a 3-item scale with response options ranging from 0 (incorrect) to 1 (correct). Questions were, “What does PSE stand for?” “Can students be members of the School Wellness Committee?” and “Which of the following sentences is trying to make you trust it?”

^fFV was assessed using a self-reported survey (e.g. How many fruits (vegetables) did you eat yesterday? Do not include fruit juice (Do not include French Fries)). Analyses ran data from consumption of 0 (no FV) to 5 (5 or more FV).

^gFV variety was assessed using a self-reported survey (e.g. Do you eat more than one kind of fruit (vegetable) each day?). Average as No (1), Yes, sometimes (2), Yes, often (3), Yes, everyday (4).

*p < 0.05

**p < 0.01

***p < 0.001

Table 6. Pre- and Post- Intervention Focus Group Themes and Student Responses¹

Themes		Pre-Intervention	Post-Intervention
<p>Outcome Expectations</p> <p><i>Achievability of students' request for their favorite FV</i></p>	School	<p><i>Yes. She wants to get what kids like.</i></p> <p><i>She may. She doesn't have to cook for a lot of people. After 5th grade lunch is over... Always busy.</i></p> <p><i>I think she wouldn't because just one person</i></p>	<p><i>It would work! They would like it and talk about it. Find two recipes and pick our favorite to add to the salad bar.</i></p> <p><i>She is going to say yes</i></p> <p><i>I think they would say "no" because there are 700 people in the school and they would have to say yes to everyone.</i></p>
	Home	<p><i>Yes [my suggestion would work] because mom would respect and want me to ask her for FV</i></p> <p><i>Maybe, because he has a lot of work to do...</i></p> <p><i>All depends because she only can buy limited groceries and can't buy extra.</i></p>	<p><i>Likes me to eat healthy. If I ask, she'll get it.</i></p> <p><i>They always say yes. They like when we ask for healthy food.</i></p> <p><i>It works. Other times no because she is busy</i></p>
<p>Self-Efficacy</p> <p><i>Confidence or comfortability in asking an adult for their favorite FV</i></p>	School	<p><i>[I feel comfortable asking because] I've known her since 3rd grade, she's a really good person and would do it.</i></p> <p><i>Yes [I feel comfortable asking], because they are kind and helpful with what they put on the menu</i></p> <p><i>Because I don't know her a lot, only a little. I would feel awkward.</i></p>	<p><i>[100% comfortable] Very comfortable because I've known them for a long time. We have a good relationship with them. It's for the school, a good environment.</i></p> <p><i>[100% comfortable] As a group, they'll talk as well. If she had a question and you don't have the answer, your friends can answer. You're with friends so not shy.</i></p>
	Home	<p><i>I would be comfortable because my mom would want me to eat healthy and would be happy.</i></p> <p><i>Yes, because my aunt always listens to me. Unless it cost too much.</i></p>	<p><i>'Cuz she is my mom. I trust her. My mom doesn't eat junk food she eats healthy food and drinks water.</i></p> <p><i>I feel comfortable asking my mom because I know her attitude and how she will respond.</i></p>

		<i>No, because they are really busy this week. Not a good time because won't listen.</i>	<i>May yell at you if waiting for money to come in.</i>
<p>Identifying Strategies</p> <p><i>Identifying ways to increase frequency of FV</i></p>	School	<p><i>Hi [adult at school], can you please put more oranges in the menu because I like them and want to eat them more.</i></p> <p><i>If I ask nicely, he will respect as a suggestion</i></p> <p><i>Would need to practice before asking.</i></p>	<p><i>Can you please add FV to the salad bar?</i></p> <p><i>I was thinking of bringing new fruits to the cafeteria to see if people like it. They can vote on them. Would you help?</i></p> <p><i>Please tell the principal to tell Sodexo to put FV on the salad bar?</i></p>
	Home	<p><i>Go to the store so you can get the fruits I want?</i></p> <p><i>If you have time when you're not busy, can you take me to the market to get grapes?</i></p>	<p><i>I would use my manners... When I shop with them, I get what I want and can make more smoothies and salads.</i></p> <p><i>I go shopping with my mom and tell her what I want</i></p>
<p>Helping at home with food</p> <p><i>Sharing skills performed at home related to food</i></p>	Home	<p><i>Last summer at grandpa's I helped grandma cut potatoes/carrots apples, strawberries</i></p> <p><i>I wash before I eat it and cut it</i></p> <p><i>I cook steak, fried fish, white rice, pancakes.</i></p> <p><i>I just dig in.</i></p>	<p><i>I chop tomatoes and onions for my dad to sauté.</i></p> <p><i>I made the veggie lasagna at home</i></p> <p><i>I wash them. Now that brother is in college, I do a lot.</i></p>
<p>Evaluation of Students Take Charge!</p> <p><i>Reflecting skills and knowledge gained and their experience with STC</i></p>	N/A	N/A	<p><i>I liked voting between the spring roll salad and veggie lasagna.</i></p> <p><i>Fun to see everyone try it and state their opinions.</i></p> <p><i>Fun to talk with everyone in the cafeteria</i></p> <p><i>I learned that if I don't like a fruit or vegetable, I can add something to make it taste better.</i></p>

³Notes were taken by an assistant moderator. To ensure trustworthiness of the raw data, the assistant moderator was to write down what students said as accurately as possible. None of the students participated in more than one group.

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APPENDICES

A. LITERATURE REVIEW

I. Introduction

Although elementary-school children usually rely on adults, both at home and school, to determine what to eat,¹ they are not meeting daily fruit and vegetable (FV) recommendations. Older children (9-13 years old) are recommended to eat at least 1 ½ cups of fruit and 2 to 2 ½ cups of vegetables per day.^{2,3} Low-income children on average consume even smaller quantities of fruits and vegetables (FV's)—0.96 cup of fruit and 1.43 cups of vegetables—compared to the national average of 1.03 cups of fruit and 1.58 cups of vegetables.⁴ Dietary habits and preferences, factors that are important in developing during childhood, influence weight status and eating practices.⁵ In the long-term, meeting these recommendations can decrease a child's risk for chronic diseases such as cardiovascular disease, diabetes, and some cancers, and can assist in weight management across the lifespan.⁶⁻⁸

One approach in increasing children's FV consumption is empowering them with skills and efficacy beliefs in order to make healthy dietary choices. According to the CDC, when older children take charge of enhancing their nutrient intake, health, growth, and intellectual development may improve.⁹ However, self-efficacy, a child's perceived confidence that he/she is capable in executing a specific behavior,¹⁰ is a characteristic that children often lack without guidance.¹¹ The Social Cognitive Theory (SCT) suggests that if children know how to act and have self-efficacy, then they will be motivated to take action, even when challenges arise.¹⁰ Therefore, nutrition interventions should aim to teach 9-13 year old children skills and increase their self-efficacy in asking for FV's with

a goal of empowering them to make healthier dietary decisions for themselves and improve their FV consumption.

Programs that utilize nutrition policy, systems, and environmental change (PSE) for interventions provide the opportunity for community members to feel empowered, have increased self-efficacy to take charge of their food environment, and make healthier choices.¹² Policy change can be at an organizational level, such as prohibiting school-sponsored marketing of unhealthy food products in public schools. Systems change can be rules and initiatives created within an organization, such as implementing a farm to school program or changing the menu cycle to provide FV's that students often prefer. Environmental change is changing the physical environment; for instance providing local produce in public school lunches.¹³ If more children are given the chance to increase self-efficacy in asking for FV's, as well as participate actively in nutrition PSE by changing their home and school food environment, they may increase their FV consumption.

Therefore, this review will begin by introducing the SCT, followed by a discussion about the home and school food environment as related to food-related decision making. This review will also discuss the importance of child empowerment, followed by examining school-based nutrition PSE interventions and other nutrition interventions that aimed to increase self-efficacy and FV consumption in older children. Lastly, this review will discuss interventions that involve focus groups that aimed to assess nutrition-related behaviors among older low-income children.

II. The Social Cognitive Theory

Using the Social Cognitive Theory (SCT) to create nutrition interventions is an established and appropriate method to promote behavior and attitude changes and should

produce successful program outcomes.¹⁴ The SCT is a theory that human behavior can be learned in a social context with a dynamic and reciprocal interaction of the person, environment, and behavior.¹⁵ By using this theory, nutrition interventions are able to include a social and instructional approach to encourage individuals, including children, to increase self-efficacy.¹⁵ The theory posits that behavior is the result of environmental and personal factors and that behavior, in turn, affects environmental and personal factors. With older children, their immediate caregivers and peers are the primary sources of social learning because children spend most hours in the day with them.¹⁶ Children will often look to caregivers and peers to determine their dietary preferences and behaviors. It is expected that environment (e.g. home and school food environment) will influence children's dietary quality and eating habits. In turn, children should be able to change these food environments and increase their self-efficacy in asking for FV's because they will feel more capable in being a part of change. Furthermore, children are more likely to participate in activities for which they have high self-efficacy for and are less likely to engage in activities for which their self-efficacy is low.¹⁵ Studies that relate the SCT to children's food environment are further explored in the following sections.

III. Home Food Environment in Food-Related Decision Making

Parents serve as nutritional “gatekeepers” in influencing children's health and dietary behaviors in the home.¹⁷ Children's consumption is modified by the exposure and accessibility of specific foods; they observe what family members eat at home and consume foods that are available at home.^{1,18–21} These associations are generally consistent despite populations of different socioeconomic status (SES).²² However, as children become older (9-13 years old), they begin to develop their own preference for

food. In this case, children need to be more involved in the decision-making process when it comes to getting the FV's they prefer. Therefore, it is crucial to expose older children to FV's they prefer or by increasing their asking behavior to ask for FV's they prefer. By increasing older children's asking behavior, their FV consumption may improve as well. The following section discusses FV availability and parental role modeling, and also examines the relationship between older children's asking behavior and FV consumption.

FV Availability and Parental Role Modeling

Van der Horst et al.²³ conducted a systematic review of observational studies on environmental correlates of FV consumption and found that FV availability, parental consumption, and role modeling were positively associated with children's consumption. Fifty-eight papers with 77 different samples were reviewed that included healthy youth (aged 4-18 years old), a minimum of a one-day measure of specific consumption related to their outcome measures, studies conducted in areas with established market economies defined by the World Bank,²⁴ and studies from international peer-reviewed journals in English. They found 100% studies reported positive associations between role modeling and parental consumption with children's FV consumption. Four out of seven studies showed association between greater availability of FV's and higher FV consumption.²³ These findings imply that future interventions should consider behavior change among parents, as they model healthy behaviors and provide food available for their children.

While it may be important to have adequate amounts of FV's available at home, socioeconomic disparities can affect FV availability and consumption at home.^{22,25,26} Children in families of low SES tend to have lower consumption of FV's compared to

children of families with high SES.²² Van Ansem et al.²² investigated how maternal education level, an indicator of SES, is related to 11-year-old children's eating behavior through a cross-sectional study. Secondary data was obtained from the Dutch INPACT study and included 1,318 parent-child dyads from the 91 primary schools located in the southern part of the Netherlands. This study used maternal educational level as an indicator of SES. Parents completed a validated Food Frequency Questionnaire of both children's and parents' FV consumption.^{27,28} In the consumption survey, parents reported how many days per week their child consumed specific FV's. Response categories ranged from *none or less than one day a week* to *7 days a week*. Parents also had to report the number of servings of FV's their children consumed daily. For fruit, response categories ranged from *0 pieces a day* to *more than 3 pieces a day*, by increments of half a piece of fruit. For vegetables, response categories ranged from *0 serving spoons* to *more than 4 serving spoons a day*, and each serving spoon was equivalent to 50 grams of vegetables. Home availability of FV's were also measured using validated questionnaires.^{29,30} Multilevel regression models were used to investigate the relationship between home food environment factors, maternal education level, and children's healthy eating behavior.

Van Ansem et al.²² found that children of mothers with high SES consumed significantly more FV's (fruit consumption 1.07 ± 0.60 , $p = 0.01$ and vegetable consumption 116.9 ± 60.6 , $p < 0.001$) compared to children of mothers with low SES (fruit consumption 0.96 ± 0.65 , vegetable consumption 94.0 ± 57.7). In addition, children of mothers with high SES were more likely to always have FV available at home ($p = 0.01$ and $p = 0.01$) compared to children of mothers with low SES. When parents

promote nutritious family-meals and supportive health behavior, this may encourage FV consumption amongst children.³¹ However, this study showed that mothers with low SES have less FV availability and children consumed less FV's compared to mothers with high SES. For these reasons, it is important to encourage parents with low SES to increase their own consumption of FV's and increase their home availability of FV's. To increase home FV consumption and availability, nutrition interventions should include parents in the curriculum to help them be better sources of support for their children. In addition, interventions can also increase students' self-efficacy in asking for their favorite FV's at home.

Asking Behavior at Home

Although parents influence food availability and nutrition behaviors of children, children must realize that, in some cases, they have the ability to ask for the specific FV's they want from their parents.¹ Heim et al.³² examined changes in children's asking behavior in the home environment and FV availability after the implementation of a garden-based FV intervention. The intervention was one component of a 12-week YMCA summer camp in Minnesota and included 93 children entering 4th, 5th, and 6th grades. Heim et al.'s³² intervention was 20-30-minutes long and was held twice a week. Children learned how to create and manage a FV garden. At the end of every lesson, children were encouraged to share experiences with parents and also to ask them to buy and serve the FV's that were grown, prepared, and taste-tested during the intervention. Through family newsletters, parents were encouraged to improve FV availability and accessibility at home. To assess children's asking behavior and FV availability and accessibility at home, parents were mailed or handed baseline and follow-up surveys to complete. Asking

behavior was assessed using an adapted eight-item scale (Cronbach $\alpha = 0.78$) and included questions such as “In the last week, did this child ask you or another member of your household to buy a certain FV when it wasn’t available at home?” Response categories were *yes* or *no*. Usual and current FV availability were assessed; usual availability included a seven-item scale (Cronbach’s $\alpha = 0.85$) such as, “In my home, there are cut-up vegetables in the fridge for this child to eat” and response categories were *hardly ever*, *sometimes*, *often*, and *almost always*. To examine current FV availability, parents were asked whether 11 vegetables (Cronbach’s $\alpha = 0.64$) and five fruits (Cronbach’s $\alpha = 0.60$) were available in their home in the past two-weeks and response categories were *yes* or *no*. McNemar’s test and Wilcoxon signed rank test was used to evaluate change from baseline to follow-up. An α level of $p < 0.05$ was used to detect statistical significance.

At the end of their intervention, Heim et al.³² found that there were significant increases in child asking behavior at home ($p < 0.01$) and home availability of FV’s ($p=0.05$), based on parents’ reports.³² Although the previous study was effective in increasing children’s asking behavior, older elementary school students (aged 9-13 years old) have the cognitive abilities to complete questionnaires suitable for their age group.³³ Parent-reported questionnaires provided only one side of the study, which were the parents point of view.

DeSmet et al.³⁴ wanted to assess whether child-reported asking behaviors predicted home FV availability at baseline and whether an online video game intervention influenced 4th and 5th grade students’ asking behaviors and home FV availability. Squire’s Quest II, a 10-episode online video game intervention, was designed

to increase children's consumption of FV's and promote children's asking behaviors in order to increase FV availability. DeSmet et al.³⁴ used secondary data from a randomized control trial with four groups (each n =100 parent-child dyads). Children took home the intervention and set goals to increase FV consumption. Baseline, post-intervention, and three-month follow-up online questionnaires on asking behavior and consumption were completed by children and questionnaires on home availability of FV's were completed by parents. Children were asked in a nine-item scale about specific asking behavior at home such as, "In the last two weeks, have you asked your parent or guardian to have FV at home for breakfast?" (Cronbach's $\alpha = 0.79$ at baseline, $\alpha = 0.77$ post-intervention, and $\alpha = 0.85$ at follow-up). Response categories were *yes*, *I don't have to ask*, or *no*. FV consumption was assessed using 24-hour dietary recalls using NDS-R computerized interviews³⁵ on three-unannounced times during each data collection time-point by staff. Consumption was averaged across three days at each time point. Parents completed a validated 40-item scale online questionnaire that inquired about home specific FV availability over the last two weeks³⁶ (Cronbach's $\alpha = 0.77$ at baseline, $\alpha = 0.82$ at post-intervention, and $\alpha = 0.71$ at follow-up). Response categories were *yes*, *not sure*, or *no*.

Analysis of covariance was used to detect baseline differences between home FV availability and children's FV consumption, controlling for possible cofounders such as a child's gender and race/ethnicity. Linear mixed-effect models were used to assess whether asking behaviors and home FV availability were influenced by the intervention. DeSmet et al.³⁴ found that students' asking behaviors significantly correlated with FV availability at baseline and post-intervention home ($R^2 = 0.44$, $p < 0.01$ and $p < 0.05$), but not at the three-month follow-up. Child FV consumption at post-intervention was

significantly correlated with home FV availability post-intervention ($p < 0.01$), but not at the other time points. Child asking behaviors significantly increased immediately post-intervention compared to baseline (9.9 ± 4.2 at baseline, 11.8 ± 4.0 at post-intervention, $P < 0.0001$), but there a significant decrease from post-intervention to follow-up (11.8 ± 4.0 at post-intervention, 11.0 ± 4.2). However, there was still a significant difference between asking behavior at baseline and follow-up ($p < 0.001$) This study may have impacted students immediately after the video-game intervention, however, asking behavior slightly decreased over a span of three-months. Limitations to this study was that the study did not have a control group for comparative purposes and that the asking scale was not validated separately for this study.

With the above studies in mind, increasing asking behavior among older children has shown to increase FV availability and may be related to FV consumption. Increasing asking behavior may lead to increased self-efficacy, but this was not assessed in these studies. This should be assessed further, as self-efficacy is pertinent to a students' feeling of confidence that he/she is capable of executing a specific behavior.¹⁰

IV. School Environment in Food-Related Decision Making

School Food Environment

It is important that nutrition interventions promote healthy dietary behaviors at this time in their lives as older elementary school students (9-13 years old) are approaching adolescence where they are more autonomous, and lifestyle, developmental, social, and environmental changes take place.,^{33,37} Moreover, during this transition to adolescence, dietary consumption patterns change and decline in quality compared with childhood consumption, which may be associated to older children's increased need for

independence.³⁸ Children spend a large portion (about 7 hours) of their day at school³⁹ and in many cases children consume almost half of the day's energy intake provided by the two school meals.⁴⁰ Therefore, schools have the opportunity to make healthy foods are available for children. Schools are able to reinforce healthful eating behaviors by including FV's at meals and providing social support and environmental reinforcement. The following section discusses children's consumption and preference of FV based on the typical school environment.

Though a substantial portion (between 19-50%) of a child's total calories is consumed at school,^{21,40,41} Fox et al.⁴² confirmed that schools' current offerings do not fully support a healthy diet for children and adolescents based on data from the School and Nutrition Dietary Assessment study (SNDA-IV). In 2010, data were collected that assessed characteristics of the National School Lunch Program (NSLP) lunches and School Breakfast Program (SBP) breakfasts from a nationally representative sample of districts, schools, and students. A total of 63% of all students in public NSLP schools participated in the study. Researchers assessed the nutritional content of school meals either offered, meaning that students were encouraged to take one serving of each type of food offered to them, or served, meaning that the number and types of food were actually served to students.⁴² They wanted to assess whether foods offered and or served met the School Meals Initiative for Healthy Children (SMI) standards, which were based on the 1989 Recommended Dietary Allowances and the 1996 Dietary Guidelines. Researchers found that 14% of schools offered and 7% of schools served NSLP lunches that met all of the SMI standards, which were not different compared to the SNDA III that assessed schools in 2004.⁴³ Moreover, 22-50% of fruits and 25-30% of vegetables offered or

served at lunch met the recommended 1/3 of students' daily FV consumption. The food that schools offer or serve are vital for students, especially students who partake in free- and reduced-fee price school meals.⁴⁴

Preferences

Older elementary school students' (ages 9-13 years old) food preferences, which is how specific food is prioritized in relation to other food items, are important determinants of food selection and consumption.⁴⁵⁻⁴⁷ Baxter et al.⁴⁸ observed 237 4th-grade students' lunch trays for consumption of FV's at school during lunchtime. They also interviewed students on the same days as they observed students' food consumption and preferences. They recorded and coded consumption as none = 0.0, taste = 0.1, some = 0.25, half = 0.5, most = 0.75, all = 1, and more than 1 serving = 2.⁴⁸ Interviews were conducted, and students recalled what they consumed for school lunch that day and were also asked how much they liked each food items available. Response options were liked *not at all*, *a little*, and *a lot*. At the end of the study, Baxter et al. found that there was a significant relationship between observed child consumption and preferences ($p < 0.001$).⁴⁸ Specifically, students consumed an average of 0.92 times the serving volume for food that they liked "a lot," 0.54 times the serving volume for foods that they "liked a little," and only 0.11 times the serving volume for foods they liked "not at all." Providing school foods without considering students' preference may be a cause for poor consumption. On the other hand, offering foods that students prefer may increase their consumption of that meal. Nutrition programs that encourage students to influence nutrition PSE may provide them the opportunity to ask for FV's they prefer to consume in the cafeteria.⁴⁹

The school environment has the potential to offer a variety of food to students, however, a majority of schools are not meeting the federal guidelines on providing recommended amounts of foods students' need such as FV's.⁴² Older elementary school students are at an age where they are beginning to be more independent with their food choices.³⁸ Thus, students are developing specific preferences for food, which may impact their consumption of specific foods such as FV's. Since factors such as food preferences may be positively associated with consumption,^{48,50} nutrition interventions should aim to empower older elementary school students in making changes to their food environment as well as include them in food-related decisions.

V. Empowerment

Empowerment is the overall feeling that a child believes he/she has power over decisions and actions.⁵¹ Empowering children with the appropriate environment and opportunity to voice their ideas, opinions, concerns, and solutions will allow them to come up with strategies in approaching health-related issues. Although there are goals to increase empowerment among youth,⁵²⁻⁵⁵ there is an overall lack of nutrition interventions that empower students in making changes in their food environment. This section stresses the importance of empowering children to make health-related changes in their immediate environment.

Youth Empowerment Programs

Empowerment programs for youth engage them in decision-making activities so that they learn how to overcome barriers and challenges.⁵⁶ These child empowerment programs are likely to strengthen attitudes, skills, and behaviors that improve functioning across a wide range of life domains. Further, these feelings of empowerment may create

sustained change. Thus, children may feel more competent and have higher self-efficacy in approaching perceived challenges and take action in future scenarios.^{57–59}

Several nations aim to empower children as they are seen as important participants in making community-oriented decisions because they can identify and provide useful input on many issues.⁵⁹ The National Strategy for Young Australians⁵⁴ implemented the Australian Government’s vision for promoting young people’s health by “empowering young people to build their own lives... and take part to be active in their communities.” The government has even offered opportunities and incentives for children to be involved in the community. Initiatives such as the Prime Minister’s Australian Youth Forum Challenge⁵³ contributed \$120,000 to help youth’s ideas become a reality and encourage them to be active in the community. The United Kingdom (UK) also created a health policy in 2004, *Choosing Health: Making Healthy Choices Easier*,⁵² which gave specific attention to young people and sought to “strengthen measures to protect children and young people and help them understand risk and develop responsible patterns of behavior.”⁵² The UK Department of Health further promoted youth’s health by advocating that they build a “culture of participation where children and young people are involved in the range of issues and decisions that affect them. Six years later, the UK government stressed, again, that there should be a public health-based approach to empower communities.”⁶⁰

Despite all the visions and policies from different nations, there is limited research investigating interventions that empower children in making nutrition-related changes in their immediate food environments. Empowering children provides them skills to voice their opinions. The need for empowering children is emerging in policies

and has been reported in the literature.^{52,54,57,59} Some nutrition interventions that include children in PSE change have aimed to empower children in making healthy changes in their immediate (school and home) environment.

VI. PSE

Policy, systems, and environmental (PSE) change interventions include community members in making nutrition-related changes to PSE. Some interventions are starting to include students in this process.^{49,61,62} Since older elementary school students are not meeting FV consumption, is important to consciously make changes that encourage them to consume healthier foods.²¹ Older children are perceived as contributing unique knowledge to identify, provide input, and suggest valuable solutions to issues.⁵⁹ It is postulated that by including children as integral members in the community, they are able learn life-long skills, gain self-efficacy, and ultimately feel empowered in making healthier dietary changes. Using children's perspective in research and decisions that affect their lives will ensure a more holistic view on nutrition-related issues and enable the implementation of more insightful solutions.⁵⁹ Therefore, child involvement in PSE research is gaining attention and popularity.^{49,61,63} This section further discusses importance of PSE research geared towards older children.

Healthy Options for Nutrition Environments in Schools was a two-year PSE intervention that included 444- 2nd and 3rd grade students and 135- 6th grade pre-dominantly Hispanic low-income students.⁶³ The randomized group trial aimed to implement a school nutrition policy and environmental change in order to make the school cafeterias healthier eating environments for the student participants and also to encourage children to make healthier choices. Over two years, Coleman et al.⁶³ observed

students monthly during mealtime at school to determine whether they consumed unhealthy food or beverages, and if so how much. This was performed using an observation system designed and tested for this study. BMI was measured at three-time points and was converted to BMI Z scores and percentile BMI values. Coleman et al.⁶³ found significant changes in the intervention; there was a significant decrease of selecting unhealthy food items over time ($p = 0.005$), whereas the control schools showed an increase in outside food items over time ($p = 0.04$). However, BMI did not significantly change. Despite non-significant changes in obesity rates, the intervention did successfully change behavior, a major step in promoting change.

Shaping Healthy Choices was a one-year PSE intervention that supported the constructs of the SCT and aimed to increase 4th grade students' nutrition knowledge, vegetable preferences, reported FV consumption, and improve BMI percentiles. The intervention aimed to do this by improving 4th grade students' behavior and attitudes, modifying factors in the home and school environments, and creating a community-based support system. Two intervention schools that included 230 4th grade students participated in the intervention, while two control schools that included 170 students did not receive any intervention. The five-lesson classroom component encouraged students to learn nutrition concepts, make recommendations, and develop reasoning skills to make healthy dietary lifestyle choices. Cooking demonstrations exposed students to a variety of vegetables, observe cooking techniques, deepen understanding of nutrition concepts, and experience preparation of recipes using all five senses. A garden component was included where students learned to harvest vegetables for cooking demonstrations as well as share them with their families. Newsletters were sent home to families that provided parents

with information on positive parenting practices in regard to providing a healthy diet for 6-12-year olds. Lastly, salad bars were installed to provide seasonal FV's in the lunch rooms.

Questionnaires were completed by students at school. At the end of the intervention, when compared with the control schools, students from the intervention schools significantly improved their nutrition knowledge (intervention school pre 19.4 ± 3.44 , post 21.6 ± 3.92 , control school pre 20.3 ± 3.67 , post 20.9 ± 3.57 , $p < 0.001$). However, there were no significant changes in vegetable preferences or FV consumption. Compared to the control group, there were greater improvements in BMI percentile ($p < 0.01$), BMI Z-score ($p < 0.001$) and waist-to-height ratio ($p < 0.001$) among students from the intervention schools. One method future interventions can do is to explore reasons for non-significant changes in vegetable preference and FV consumption. Future studies can explore this by conducting qualitative research methods such as focus groups. Overall, these results show that when implementing a one-year PSE intervention in and beyond a classroom, that there were improvements in students' BMI percentiles.

Empowering Urban School Children to Increase Fruit and Vegetable Consumption Through EFNEP-Enhance PSE Intervention (EMPOWER) was a school-based PSE intervention aimed to empower 5th grade students to change their food environment and improve FV consumption.⁴⁹ Students were provided opportunities to influence nutrition PSE by learning how to write about a FV they like to the School Wellness Committee, participating in a recipe contest, marketing activities, and influencing the school menu cycle. The main outcomes in this 2x2 quasi-experimental pilot study were knowledge and FV consumption among two intervention schools that

participated in PSE lessons (n = 142), and two control schools that did not participate in PSE lessons (n = 170). FV consumption was measured using the SNAP-Ed FV Checklist to assess how many FV a student consumed yesterday. The FV consumption survey included seven-items and included six response categories that ranged from *0 to 5 or more times*. The knowledge component of the survey included nine-items that assessed FV knowledge and seven-items that evaluated students' PSE knowledge. Nutrition educators at SNAP-Ed determined that this survey component has face validity. The knowledge-related items were coded as 1 = correct and 0 = incorrect or missing.

To assess between group differences, Goodwin et al.⁴⁹ used an analysis of variance for FV consumption and an analysis of covariance for knowledge as FV and PSE knowledge were significantly different at baseline. At the end of the intervention, the intervention group significantly increased their PSE (intervention group 5.01 ± 1.6 , control group 3.7 ± 1.7 , $F = 37.56$, $p < 0.001$) and FV knowledge (intervention group 4.6 ± 1.9 , control group 4.1 ± 1.6 , $F = 3.94$, $p < 0.05$) and attitudes (intervention group 19.4 ± 2.6 , control group 18.2 ± 2.17 , $F = 5.86$, $p < 0.05$) as compared to the control group. However, FV consumption did not significantly increase between or within groups. SNAP-Ed Fruit and Vegetable Checklist had not been validated, a limitation that may have made it difficult to see a significant effect.⁴⁹

Lepe et al.⁶⁴ conducted process evaluations of the same intervention. Process evaluations were used to monitor and record program delivery and helped explain program outcomes. The assessment included focus groups with students and semi-structured interviews with school staff.⁶⁴ The interviews with the staff assessed quality of program delivery and perceived barriers and successes during the intervention. A

majority of school staff indicated that they felt there was an increase of students' self-confidence in requesting FV's at home and school. Focus groups assessed 5th grade students' evaluation of the intervention, attitudes, and overall opinions of the intervention. Students reported making dietary changes in focus groups because of the intervention (i.e. "I asked mom to put FV's in refrigerator where I can see them"). Despite these reported changes in self-efficacy from school staff and dietary changes from students, there was no change in FV consumption.⁴⁹ In addition, the difference between self-efficacy perceived by school staff and consumption could not be explained because self-efficacy was not assessed among these students in the study.

Overall, more PSE interventions for children are needed. Such programs could help improve the food environments at school and home, two places where children spend the most time. However, despite the PSE interventions' aim for creating lasting change, previous interventions failed to assess self-efficacy, students' confidence that he/she is capable of executing a specific behavior.¹⁰ If students participate in creating PSE change coupled with nutrition education, then they may increase self-efficacy in incorporating specific healthy behaviors into their daily lives.⁶⁵

VII. Self-Efficacy

Self-efficacy, the extent to which one feels capable of reaching a particular goal⁶⁶, is considered an essential component of empowerment.^{59,67} The SCT posits that if children have high self-efficacy in executing a specific behavior, then they are more likely to act on that targeted behavior even when faced with a difficult task.⁶⁸ Thus, it is important for child nutrition programs to incorporate self-efficacy and monitor those changes. Multi-component interventions involve multiple modes of learning to improve a

specific outcome,⁶⁵ and some of these interventions have targeted children's self-efficacy, but these interventions are limited.⁶⁹⁻⁷¹ The following section discusses self-efficacy in multi-component interventions, which has been assessed and validated in quantitative measures in child nutrition research.

Self-Efficacy Instrument

High quality measurement tools are important in developing interventions that address the needs of a specific population. Self-efficacy tools that provide a detailed snapshot of a child's confidence in performing a specific behavior are needed. Developing valid tools that are sensitive to complex environments, such as those of diverse low-income populations, are important when including participants in that demographic group⁷². In 1996, Domel et al.⁴⁵ constructed a self-efficacy scale tailored for 4th-and 5th-grade children, half of which were from low-income families. This scale was pilot-tested with 140 students at first, then field-tested with 252 students from two schools in an intervention trial that aimed to increase FV consumption among 4th-and 5th-grade students. Domel et al.⁴⁵ first included 34-items that focused on targeted behaviors for change, such as purchasing and selecting FV's over unhealthy items for after school snacks and including fruit for breakfast and FV's for lunch. These items were created based on noting behaviors targeted for change in a FV school curriculum. The 3-point Likert scale ranged from 'not at all confident,' to 'a little confident,' to 'very confident.' Cronbach's alpha coefficients were assessed to be 0.88 and 0.92 within the first two administrations. Test-retest reliability between the two pilot tests was 0.70.

After the pilot testing, modifications were made to the self-efficacy scale. Wording was modified in two items and the word "confident" was changed to "sure" in

response options due to results and comments from survey collectors. The scale was tested twice more. For the field tests, Pearson product-moment correlations were used to determine test-re-test reliabilities and Cronbach's alpha was used to assess internal consistencies. Cronbach's alpha coefficients were found to be high and ranged from 0.72 to 0.87, which signified that scales were reliable. Pearson product-moment correlation between the self-efficacy sub-scales were low and ranged from 0.21 to 0.57, which signified that they were measuring separate constructs. From baseline to follow-up, test-retest reliability decreased, but was still acceptable according to the authors (baseline was between 0.52-0.67 and follow-up was 0.35-0.63).

Impact of Nutrition Interventions on Self-Efficacy

Baranowski et al.⁶¹ used the original self-efficacy scale for FV consumption and then added another dimension measuring self-efficacy in asking and shopping for FV's for their nutrition intervention *Gimme 5*. Participants included mainly Caucasian 3rd-grade students from 16 elementary schools, and they were followed for two years. The aim of this SCT-based intervention was to assess students' fruit, juice, and vegetable (FJV) consumption after increasing FJV availability-accessibility and enhance preference for FJV. *Gimme 5* also aimed to train students in FJV preparation and goal setting and problem solving for previously unattainable goals. Specific activities in this intervention included having students write to the principal about a vegetable they like, asking for favorite veggies at home, and role-playing skits to ask that fruit be more available at home for various meals. Principal components analysis indicated two types of self-efficacy in terms of FJV consumption.

Twenty-two self-efficacy questions that were included in this instrument focused on 12-items regarding eating FV self-efficacy, (e.g. “I think I can add my favorite fruit to my favorite cereal”) and 10-items regarding asking and shopping self-efficacy (e.g. “I think I can ask my parent or guardian to buy my favorite fruit the next time she or he goes shopping”). Response categories for self-efficacy included *I strongly agree* (1), *I agree* (2), *I do not agree* (3). Survey questions were analyzed using Cronbach’s alpha coefficients to assess whether the scales were reliable. The Cronbach’s alpha for eating self-efficacy was less reliable; all three years were below 0.60 (Year 1 $\alpha = 0.51$, Year 2 $\alpha = 0.53$, Year 3 $\alpha = 0.58$). The Cronbach’s alpha for asking and shopping self-efficacy for all three years remained above 0.75 (Year 1 $\alpha = 0.89$, Year 2 $\alpha = 0.90$, Year 3 $\alpha = 0.90$) indicating internal consistency. Consumption was assessed using students’ 7-day food records, which were coded by trained dietitians. To assess validity and reliability on serving sizes, interrater reliability across 20 7-day food records was assessed, which came out to be 95% for what meal it was, 92% for food group recorded, and 80% for number of servings per day.

Continuous variables were analyzed using a mixed-model analysis of variance to assess between group differences. At the end of their intervention, Baranowski et al.⁶¹ found that there were no significant differences in self-efficacy between groups. However, there were significant group by time differences with FJV consumption combined ($p = 0.038$) and vegetables alone ($p = 0.004$), but not fruit. This study indicated a change in eating behavior, but not self-efficacy, thus, consumption and self-efficacy were not associated. Self-efficacy items were situation-specific, which could have may not be indicative to what students learned during the intervention.

Keihnner et al.⁷³ conducted a randomized control study called *Power Play! Campaign's School Idea & Resource Kits* that included 10 grade-specific lessons designed to increase FV consumption and assessed students' self-efficacy, knowledge and outcome expectations. Specific activities included writing a persuasive letter to a friend to encourage them to try FV's, using advertisement techniques to eat more FV's, and role-playing scenarios that help the student advocate respectfully for healthier food at home. Participants included 1,154 4th-and 5th-grade students from 31 low-resource schools. A majority of the students identified as Hispanic (58%), and the students were split almost evenly by gender. The self-efficacy component of the surveys included 8-items on asking/shopping self-efficacy and 3-items on eating self-efficacy from the study conducted by Baranowski et al. but contained fewer questions for reasons unexplained. Response categories for these students *disagree very much, I disagree a little, I am not sure, I agree a little, I agree very much.*" Cronbach's alpha, used to assess internal consistency of the asking and shopping self-efficacy components, was 0.80 at pre-intervention and 0.88 at post-intervention. By the end of the intervention, students in the intervention group had significantly increased self-efficacy more than the control in asking/shopping (adjusted change scores: intervention = 1.47, control = 0.77, $p = 0.04$). This study exhibited the effectiveness of an intervention that aims to increase FV self-efficacy among an ethnically and socioeconomically diverse as well as vulnerable population. However, this study failed to assess changes in behavior in regard to FV consumption.

In 2004, the Child Nutrition and WIC Reauthorization Act required all schools participating in a federally funded school meal program to create a School Wellness

Advisory Council to instill policies that improve children's dietary behavior and health by 2006.⁷⁴ One such feature is to "involve parents, students, and representatives of the school food authority, the school board, school administrators, and the public in the development of school wellness policies." Following the Act, Wright et al.⁷¹ created a 6-week Kids Nutrition and Fitness (KNF©) program that included a School Wellness Board that involved both parents and other community members. The purpose of this study was to evaluate the effect of a family-focused coordinated school health program on child self-efficacy and weight status. A total of 10 schools were randomly assigned to be in the KNF© group, who received after-school physical activity and nutrition program and received the coordinated school health aspects of environmental activities for the school and home. The general education (GE) group participated in the standard physical activity program but did not receive any physical activity or nutrition education nor participated in environmental activities. On a school and community level, the KNF© schools created a School Wellness Advisory Council that implemented wellness policies to prevent undesirable weight gain and dietary behaviors among a sample of 8-10-year-old, low-income, Mexican-American children (n = 251). Home-level activities were included via bimonthly educational newsletters created by the School Wellness Advisory Council.

Wright used the Child and Adolescent Trial for Cardiovascular Health After-School Student Questionnaire to examine self-efficacy, which took approximately 30-minutes for students to complete. It was originally designed to measure behavioral and psychosocial variables among children ages 7-12 years old. However, these questions were modified based on the CATCH SPAN Health Behavior Questionnaire.⁷⁵ The

questionnaire included 6 questions pertaining to dietary consumption for the previous day and the response categories were *0, 1 time, 2 times, 3+ times*. There were 10 questions on students' food knowledge asking them to choose the food that is better for their health and 3 questions on knowledge in regard to the food pyramid; response categories were coded as *correct* or *incorrect*. Lastly, and 8 questions on dietary self-efficacy (based on how certain a child was that they could eat certain foods); response categories were *not sure, a little sure, and very sure*. Though this scale differed from the previous asking/shopping self-efficacy (based on how certain a child was that they could ask for their favorite FV's),^{45,61,73} this instrument still assessed students' confidence of making behavior changes as a result of a PSE intervention.

Wright et al.⁷¹ found that changing the school environment significantly reduced body mass index (BMI) and BMI z-score ($p = 0.04$, $p = 0.03$). There were also significant increases from baseline to the 12-month follow-up for vegetable consumption (KNF© pre 1.51 ± 0.50 , post 3.03 ± 2.11 , $p = 0.03$), fruit consumption (KNF© pre 1.40 ± 0.54 , post 3.40 ± 0.32 , $p = 0.001$) knowledge learned from the food pyramid (KNF pre 5.38 ± 0.51 , post 9.76 ± 0.51 , $p = 0.001$), self-efficacy of healthy food choices (KNF© pre 2.02 ± 0.13 , post 4.04 ± 0.13 , $p = 0.03$). The SCT embedded in these interventions helped enhance children's behaviors and beliefs about FV through experiential learning. However, future KNF© interventions should consider assessing asking self-efficacy for students' preferred FVs for consumption because dietary self-efficacy would already pertain to students' confidence after FVs are available in a students' food environment.

Self-efficacy is an important construct of SCT, but limited studies assess self-efficacy as an outcome. Moreover, the interventions appeared to have low association

between self-efficacy and FV consumption. Future studies should aim to associate self-efficacy instruments with associated behavior such as asking for FV's and FV consumption. On the other hand, when researchers use qualitative research such as focus groups, researchers may be able to develop and assess people's understanding of the meaning that they ascribe to their experiences. Though changes self-efficacy has been examined in four large studies through quantitative approaches such as surveys, focus groups that assess students' self-efficacy as an outcome of PSE interventions may help detect such changes.

VIII. Focus Groups

While quantitative tools, such as conducting focus groups, can be a useful way to assess a population, qualitative data can often reveal themes that quantitative data cannot detect. Focus groups should be implemented with specific methodologies for reliability and validity of the data. Qualitative data share a similar goal as quantitative data, in that both attempt to understand a certain phenomenon from the perspective of those who experience it.⁷⁶ By giving children the chance to cultivate ideas and solutions, they can provide added meaning and perspective that may differ from those of adults.³³ This section will summarize focus group methodologies followed by qualitative studies that assess nutrition-related opinions among low-income older elementary school students.

Focus Group Methodology

Focus groups require a specified methodology for the selection of candidates, data collection, analyses, as well as interpretation to maintain reliability and validity. Typically, when assessing a primary outcome through focus groups, participants are selected randomly to eliminate selection bias.^{76,77} Questions developed by researchers are

tested for clarity, comprehension, and suitability in pilot focus groups with participants who are not included in the study, but who are of similar age and demographics.⁷⁸ Focus groups should be conducted until data collection no longer generates new information, meaning that data is at a point of saturation.^{76,77} Focus groups are generally audiotaped and transcribed verbatim and analyzed using a qualitative data analysis software. Researchers then systematically analyze transcripts by coding responses and identifying common themes according to content analysis procedures.^{76,77} After reading the transcript repeatedly, researchers code by labeling a response or phenomenon in the text.⁷⁹ Two researchers independently code and identify themes that were common to all focus groups at that time point, with a third reviewer available to resolve discrepancies. The general minimal benchmark for inter-rater reliability between two qualitative reviewers is thought to be around 80-90%.⁷⁶ Lastly, when several themes emerge from reading the manuscript repeatedly and are finalized, quotes are selected to represent each theme, which provide generalizations suitable for the study results.⁷⁶

Older children (ages 9-13 years old) are likely to possess sufficient cognitive skills, enabling them to have meaningful participation in focus groups.³³ However, older children are also at an age when they can be inhibited about sharing their views and personal opinions in a public space.³³ Moreover, they are nearing the transition period when they explore their independence over food selection.³³ Thus, focus groups with participants in this age group can help them to express their own opinions and to assess how the intervention influenced their nutrition-related behavior. This may be an optimal time to intervene and assess their progress. The following studies follow the focus group approach explained above and use older children as their target population.

Focus Groups with Low-Income Students

Focus groups are an excellent approach to use when working with disempowered, low-income populations. Children from low-income families may experience hardships in their daily lives, in which they can provide unique perspective when including them in focus groups. Molaison et al.⁸⁰ held focus groups as part of a research phase of a pilot intervention to increase FV consumption. Forty-two low-income children, aged 10-13 years, were included in this study and identified as African-American from the South. The Social Cognitive Theory (SCT) guided focus group questions related to consumption. Each focus group included 5-7 students, was homogenous in age and gender, and was conducted by graduate students and research staff. Each focus group was audio recorded and was then analyzed by three separate reviewers who identified themes. In the final step, one reviewer compiled emerged themes and developed a narrative summary; then all reviewers assessed the final themes to ensure accuracy.

Molaison et al.⁸⁰ found that taste emerged as a limiting factor to consumption and children reported adding sugar or cheese if they were going to eat the vegetable. Also, both age and gender groups displayed themes of empowerment, such as high levels of self-efficacy for FV's. Students reported that their self-efficacy in the presence of peers would be especially high. However, the only group that did not express high levels of self-efficacy was the 13-year-old males. For example, one child said, "Because my parents don't teach me to eat... you know, different types of fruit and vegetables." Another theme students discussed was the lack of availability of FV's, which impacted consumption. One child said, "Most of the time, we don't have them at home... 'cause fruit is not something parents just buy, just to be buying." Lastly, children talked about

their lack of control about decisions of what they ate at home. A child pointed out, “because my momma does the cooking, and she chooses.” These quotes displayed themes that children generally experience, which was the lack of control in their household, and that decisions made by adults, influence children’s FV consumption. The lack of empowerment is evident in the children’s home environment because adults are the nutritional gatekeepers, thus they are the decision makers on what foods are available at home.⁵

Evans et al. also examined barriers affecting FV consumption as well as identifying strategies to increase FV frequency at home and school through five focus groups (n= 3 male groups and n=2 female groups). Participants included 48 10-14-year-old African American students. They used the SCT to provide the theoretical framework for developing focus group questions; focus group questions assessed students’ perceived outcome expectations for eating FV and barriers surrounding healthy eating at home, school, and with peers. Four trained moderators and assistants conducted focus groups, using 10 questions and ten probes. Focus groups included nine to ten students and were audio recorded. Students had to first complete a demographic survey, followed by the moderator summarizing the purpose of the study and obtaining verbal consent from the students before asking the focus group questions. For analysis, the researchers used a coding scheme to identify and categorize themes related to healthful eating. Researchers determined a theme if more than half of the students had similar responses. Interrater reliability was 90%.

Evans et al. found that barriers for healthful eating were: lack of availability/easy access to unhealthful foods, parent’s shopping for unhealthy foods, undesirable taste,

social pressure to eat unhealthful foods, unappealing, and lack of variety of school lunch. Identified strategies to increase healthy eating from students were: to make healthy food taste better, help parents make choices at the store, have peers be healthy role models, offer healthier and appetizing foods at school, and teach students how to be proactive in helping others eat healthier. These children appeared to want change given the barriers reported. These findings could serve as the basis for nutrition interventions.

Low-income children's ideas and personal opinions have been successfully assessed in focus groups.⁸¹ Keim et al.⁸² investigated FV consumption from the perspective of healthy Caucasian and Mexican American, low-income 3rd-grade children. A total of 27 Caucasian and 30 Mexican-American children participated in focus groups. Questions were developed based on focus group questions used by Baranowski and Domel Baxter that were used with middle-income and low-income 5th-grade children.⁸³ Questions were altered based on appropriateness to the study's population, which were 3rd-grade students with a more diverse background. All focus group transcripts were transcribed, and two reviewers labeled and compared codes independently. Inter-rater reliability in the Mexican-American and Caucasian groups was found to be 94% and 95%, respectively, and an intra-coder reliability of 98% and 97%, respectively, was found. Then a qualitative data analysis program to assist with coding and sorting was used. If a code word was used multiple times within a group by different children, the code would be labeled as a theme.

Keim et al.⁸² found that the participants showed cultural differences in terms of their FV preferences. Mexican-American children had the skills and experience of preparing FV dishes compared to Caucasian children. With regard to personal factors of

the SCT, Caucasian children preferred peanut butter and ranch as a vegetable dip, compared to Mexican-American children who preferred adding salt, lime, and chili to vegetables. This shows that understanding cultural differences and children's preferences are essential if the focus is to increase children's FV consumption. These thoughts and opinions could have been difficult for children to answer in a quantitative survey.

It is difficult to know what children's needs are without asking them, and their opinions are often overlooked. It is therefore important that we incorporate children's opinions and ideas on how to promote healthier lifestyles, especially if it pertains to them. PSE interventions have encouraged children to participate in influencing nutrition PSE in their school and home environments.^{49,64} In addition, limited quantitative measures have shown that nutrition interventions aiming to increase FV consumption and self-efficacy improve children's food behavior.^{47,69–72} Focus groups should also be incorporated when determining the efficacy of an intervention designed to make children healthier, as they capture children's ideas and own experiences that are too complex or abstract for surveys. Again, it is also crucial that vulnerable populations are included in nutrition related interventions and assessments as they are groups that are impacted the most in terms of their lack of FV consumption as well as other dietary behaviors.

IX. Conclusion

Findings from the studies in this review indicate that the resources available to children influence them, whether it is nutrition education programs or having more FV's accessible to them. In this review, both the home and school food environment emerged as important factors in influencing students' food choices. Despite the fact that 5th-grade students are capable in changing healthful choices and life habits,⁵⁹ nutrition

interventions that target self-efficacy to increase FV consumption among 5th-grade students have showed mixed results. Many of the interventions reviewed failed to include children in nutrition PSE change and many studies failed to assess the relationship between self-efficacy and consumption. This is a limiting factor because older children have the ability to generate ideas and express concerns. Their input uniquely reflect their generation's desires for making appropriate improvements to their food environment at home and school. In addition, strategies can be applied to solidify their knowledge of nutrition, while increasing their abilities to apply their knowledge and skills in the future. Thus, future PSE interventions with older elementary school students should consider and include a mixed methods approach to quantitatively and qualitatively assess changes self-efficacy.

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B. EXTENDED METHODOLOGY

Overview

The 2x2 quasi-experimental mixed-method study used quantitative and qualitative data from Students Take Charge! (STC). This study was approved by the University of Rhode Island Institution Review Board. Students Take Charge! was an eight-lesson in-school PSE-intervention conducted by Rhode Island Supplemental Nutrition Assistance Program Education (SNAP-Ed) that began January 2017 and ended April 2017.

Setting and Participants

This study involved 5th grade students from two low-income elementary schools in Providence, Rhode Island. The two schools were preselected for this study by an established relationship between SNAP-Ed and the Providence Public School's wellness director. Following selection for the study, schools were randomly chosen to be either the treatment or control group. A total of 184 students participated in the intervention (n=108) and control schools (n=76), but only students who completed the self-efficacy survey in its entirety were part of the analytic sample. At pre-intervention, 19 students did not complete the surveys in its entirety, and four students missed one question on the self-efficacy survey. At post-intervention, five students did not complete the surveys in its entirety, and one student missed one self-efficacy question. A total of 13 students did not complete the surveys at both pre- and post-intervention. Thus, the final analytic sample was 142 students, 85 students in the intervention school and 57 students in the control school.

Within the city school district, 58.9% of the student population identified as Hispanic, 16.8% identified as black, and 15.3% identified as white.¹⁵ Moreover, a total of

87% of the students in the district were eligible for free or reduced-fee lunch¹⁶, indicating their families have incomes below 185% of the poverty level.¹⁵

Intervention School: A total of 108-students from four classrooms participated in STC. At pre-intervention, 11 students did not complete the self-efficacy surveys in its entirety. At post-intervention, three students did not complete the surveys in its entirety. A total of nine students did not participate in both the pre- and post-intervention. The analytic sample was 85.

According to school data, two-thirds of the school population identified as Hispanic (66.3%), 17.9% identified as black, and 5.5% identified as white.¹⁰² Additionally, most of the students came from low-income households, 92% of the students qualified for free or reduced-fee lunch.¹⁰² The intervention school received the PSE intervention, pre- and post-surveys assessing self-efficacy, knowledge, and FV consumption, and participated in pre- and post-focus groups.

Control School: A total of 76 students from three classrooms participated in STC. At pre-intervention, eight students did not complete the surveys in its entirety, and four students missed one question on the self-efficacy survey. At post-intervention, two students did not complete the surveys in its entirety, and one missed one question on the self-efficacy survey. A total of four students did not complete the pre- and post-intervention surveys. The analytic sample was 57.

Similar to the treatment school, school data indicated that about two-thirds of students identified as Hispanic (64%), 15.5% identified as black, and 10.4% identified as

white. Similar to the intervention school, a majority of students of students (84%) qualified for free and reduced-fee lunch.¹⁵ The control school only received pre- and post-surveys assessing self-efficacy, knowledge, and FV consumption.

Intervention

Students Take Charge!, an 8-lesson PSE-intervention, was delivered by trained SNAP-Ed nutrition educators. This intervention focused on providing students opportunities to influence nutrition PSE through participating at the school Wellness Committee meetings, conducting caretaker interviews, participating in a recipe contest, taste-testing recipes, marketing activities, and influencing the school menu cycle. All of these opportunities aligned with the SNAP-Ed goal of encouraging students to consume more FV. Each lesson was 30 minutes long. At the end of each lesson, a family newsletter was sent home that included nutrition education and a healthy recipe to encourage parents and children to incorporate FV into their day. The home component of this intervention required students to choose a favorite recipe with their caretakers that had a FV as the main ingredient. Upon submission, nutrition educators and the school food service company, Sodexo, determined recipe eligibility, deemed whether the recipes could be reproducible for mass production in school, and cooked as well as tested students' recipes for accuracy. Two recipes were chosen to be tasted-tested by the 5th grade students. The 5th grade students tasted and voted for the recipe they wanted to see featured on the menu on recipe-tasting day. On recipe-tasting day, the whole school had the opportunity to taste-test the winning recipe and vote if they would eat it again or not (Table 1).

Study Procedure

Data collection

Surveys were distributed to each participating 5th grade classroom at the treatment and control school twice, one at baseline before the first lesson and follow-up after the last lesson. Students first completed demographic information on the front cover of the survey packet (age, name, gender, language spoken at home, and their racial identity). Following the instructions read aloud by the SNAP-Ed educator in English, students completed surveys pertaining to self-efficacy in asking for FV, knowledge of FV and PSE, and consumption of FV. All surveys were given on paper in both Spanish and English at pre- and post-assessment. The control group data were collected within a 2-week period of treatment group data collection for pre-and post-assessments following the same procedures as the intervention school.

Survey Instruments

For the first aim, the self-efficacy survey used was developed by SNAP-Ed Educators as part of STC. The self-efficacy scale was adopted from a validated and reliable instrument¹⁰³, which had been tested among 9- to 11-year old low-income students. The original 11 items were revised in order to fit the needs for STC and items removed that did not pertain to situational self-efficacy in asking for FV at school and home. Three cognitive interviews were conducted in order to ensure clarity, comprehension, and suitability with low-income 5th grade students from a school that did not participate in the main study but had similar demographics. Prior to the 1st cognitive interview, a total of five items on fruit and vegetable consumption and shopping were removed because they were not relevant to the target self-efficacy or duplicated topics in other items. In addition, four items that relate to changing their food environment at

school were added because the original survey did not include questions pertaining to school. Wording was modified in one item to assist with comprehension (“ask someone in my family to have *cut up vegetables* out where I can reach them” to “ask someone in my family to have *vegetables cut up* where I can reach them.”) Lastly, “fruit” and “vegetable” were underlined in 2 places to help students focus on the subject of the statement. After the first cognitive interview, three items were removed because they consistently confused students. Students also had a hard time understanding “reach” in the statements, “I think I can ask someone in my family to have fruits where I can reach them” and “I think I can ask someone in my family to have vegetables cut up out where I can reach them.” Thus, instead the word “get” was substituted to clarify misunderstandings. After the second cognitive interview, “reach” was added back because students stated that they don’t know where mom *gets* fruits and vegetables. There were no further changes after the 3rd cognitive interview. The seven items were used for STC focused on objectives important in this study (five questions pertaining to home and two questions pertaining to school) and used the original response categories, “I disagree very much,” “I disagree a little,” “I am not sure,” “I agree a little,” and “I agree very much” (Appendix D).

The original self-efficacy instrument contained seven items. Exploratory factor analysis found that four items loaded on one component, which represented home self-efficacy, two items loaded on a second component that represented school self-efficacy, and one item did not load on either (“I think I can ask a family member to serve my favorite fruits for dinner.”). Thus, it was excluded leaving four home self-efficacy questions and two school self-efficacy questions.

For the exploratory aim, the knowledge and consumption survey had been used in the STC's pilot program conducted one year prior.¹¹ The knowledge survey comprised of two assessments; three items that examined students' knowledge on FV recommendations (e.g. "How many fruits (vegetables) should 4th and 5th graders eat each day?") and three items that evaluated knowledge on PSE (e.g. "What does PSE stand for?"). For analysis, each item was scored as correct or incorrect (range 0-1; 0 is incorrect and 1 is correct). The consumption survey also had two components, which assessed students' FV consumption recall from the day prior (e.g. "How many fruits (vegetables) did you eat yesterday? Do not include fruit juice (Do not include French Fries).") and FV variety in general (e.g. "Do you eat more than one kind of fruit (vegetables) each day?"). For analyses, response categories specifically looked at quantity for FV recall (range 0-5; 0 is no FV and 5 is five or more) and frequency for FV variety (range 1-4; 1 is no variety every day and 4 is variety every day) (Appendix D).

Student Focus Groups

For the second aim, focus groups were conducted twice with students at the treatment school, eight focus groups at approximately one-month pre-intervention and eight focus groups approximately one-month post-intervention. Each focus group consisted of three to four- 5th grade students, with a total of 32 pre-intervention and 30- post intervention (n=62). The teacher selected the students based on availability and willingness to participate. The primary researcher moderated the focus groups together with an assistant moderator who took notes of the discussion. The focus groups were on average 31 minutes long and conducted at an empty waiting area in school where it was quiet and convenient. The assistant moderator recorded all responses from each focus

groups on paper. The note taker was asked to record student's responses as accurately as possible in each focus group.

A semi-structured moderator guide was used to facilitate the discussion. The moderator guide was modified based on two pilot focus groups that were conducted in Fall 2016 (Appendix E). The focus group objectives were to ask students about their favorite FV's at home, followed by questions on who controls access to that food, identifying strategies for increasing frequency of food, and how to change the menu that is offered at home (Table 2). Similar questions were asked about FV's at school. The first pilot interview was tested among 4- 5th-grade students at another school of similar demographics to the treatment school in Providence, RI. The moderator guide for the first pilot focus group included six open-ended questions and three probes, and the session was a total of 10 minutes long; students responded in short sentences. Revisions were made, increasing the number of open-ended questions to eight questions and six probes. Questions were altered to be more engaging and more personalized for the students such as, "Let's play a game. Who is the first one who can tell me an adult at school you would talk to, to get more of your favorite fruit or vegetable at lunchtime? Let's pretend I'm that person and you are asking me to put your favorite fruit and vegetable in the menu more often. What would you say to me?" Questions written to stimulate student engagement, which encouraged them to discuss ideas and issues related to perceived empowerment of asking for fruits and vegetables. During the second pilot focus group with children from another school in Providence, RI, the session was 40 minutes long and children seemed more stimulated with school questions than home questions. Thus, the final script was modified to ask school-based questions first, followed by home-based questions to

encourage engagement. Two questions were added about what they think an adult would do as a result of their request for FV's and about a child's comfort level in asking an adult for their favorite FV, since these types of responses were raised in the second pilot focus group and pertained to perceived empowerment. If they had low or high self-efficacy, it may be due to feasibility or comfortability. These changes were finalized for the pre-intervention focus groups at the intervention school (Appendix E).

The finalized focus group outline began with an introduction, followed by a summary of the study's purpose and a verbal permission of the students' consent. Next, students were asked an icebreaker question to help them feel more comfortable. There were approximately thirteen questions and four probes asking questions pertaining to the school environment, followed by questions pertaining to home. At the end of each focus group, the moderator thanked the students for their time.

Several changes were made for post-intervention focus groups. To enhance engagement as well as to provide a reason for their response regarding comfortability in asking an adult for FV, a comfortability scale was added to the Post-Intervention Moderator Guide. The comfortability scale was used for the question on how comfortable students were in asking an adult for their favorite FV during meals by themselves (asking school and home adults) and as a group (asking school adults only). The scale ranged from one end of the scale that indicated "No way, I'm not comfortable at all" to the other end of the scale that indicated "Yes, let's do it. I'm very comfortable," with an option to put the arrow between each response (Appendix F). Additionally, a question reflecting students' experiences of STC was also asked. This allowed students to share and reflect skills and knowledge gained and whether they had a positive experience or not.

The primary researcher relied on the assistant moderator's notes. The assistant moderator was instructed to write down on paper what students said as accurately as possible. In addition, students that participated in focus groups were assured that their responses were to remain confidential. Notes taken by the assistant moderator were collected, transcribed on Microsoft Excel and Microsoft Word, and then was reviewed by the primary researcher.

Data Analysis

For the first and exploratory aims, data were analyzed in SPSS 23.0 (SPSS Inc., Chicago IL). Baseline differences between groups was assessed by Chi Square for categorical variables and independent t-tests for continuous data. The six-item SE instrument consisted of two factors, a home and a school factor. The reliability of each factor of school and home self-efficacy questions was assessed for the current study. The 4-home self-efficacy questions were found to be reliable (Cronbach's $\alpha = 0.72$). The 2-school self-efficacy questions had lower reliability (Cronbach's $\alpha = 0.60$). ANCOVA was used to control effect of clustering for class comparing intervention and control groups over time for self-efficacy at school and home. When assessing normality, home self-efficacy questions were not normally distributed, therefore, within group change was assessed using a Wilcoxon signed-rank test. All other within group change was assessed using paired t-tests. For all tests, statistical differences were set at $P < 0.05$.

For the second aim, it was assured that focus groups were conducted until data collection could no longer generate new information, meaning that data was at the point of saturation.^{97,98} This data was thematically analyzed to code the focus group data. Specifically, thematic analysis was used because, so far, there had been no such focus

group studies dealing with student empowerment as a result in nutritional decision making, and therefore the coded categories and themes were derived directly from the data.¹⁰⁴ According to Braun & Clarke¹⁹, the first step is to have the reviewer familiarize with data by transcribing, reading, and noting initial ideas. Secondly, the reviewer creates initial codes by coding interesting phenomenon of the data systematically across the data. Third, the reviewer must merge codes into initial themes and gathering evidence relevant to each theme from the data. The reviewer must then review each theme for appropriateness in relation to codes and the entire data set. Lastly, the reviewer must define each theme, ensuring that each theme is appropriate for the study's aim.

This iterative process thus allowed the primary researcher to focus on identifying meaning across the dataset with flexibility, meaning that it is not bounded to theoretical commitments and may allow for interpretation.¹⁹ The questions were organized a priori to organize the data. The primary researcher initially reviewed and analyzed the pre-intervention focus group transcript in Microsoft Excel, in which findings from each focus group question were summarized, then categorized, and finally made into themes. A total of four themes emerged in the pre-intervention focus group data, which were *“confidence”, barriers/assistance, supportive environment, incorporating techniques*. To ensure trustworthiness an outside reviewer was blindly assigned in coding pre-intervention focus group transcripts in Microsoft Excel. Instructions on coding were created by the primary researcher and were given to the outside reviewer (Appendix G). The primary researcher and outside reviewer then identified and reported preliminary codes²⁰ by independently reading the transcripts on Microsoft Excel and label a specific

color to an idea or phenomenon in the text²¹. The primary researcher and outside reviewer then compared codes (Appendix H).

The primary researcher compared the two coded documents. There was an 84% disagreement on coding *Identifying Strategies*, in which the primary researcher had coded students role-playing by hypothetically asking an adult to increase frequency of their favorite FV (e.g. *May we please get kale at the store?*) and the outside reviewer did not code those responses at all. However, both reviewers coded students' responses as *Identifying Strategies* when they reported specific strategies they would do to increase FV frequency (e.g. *I would say please* or *If we ask nicely*). Including the substantial disagreement on *Identifying Strategies*, there was a 70% total agreement between the primary researcher and outside reviewer's codes. In consultation with the research committee, it was decided that the broader interpretation was appropriate for this code. Thus, a third reviewer determined appropriate codes for all codes that were not similar. The general minimal benchmark for inter-rater reliability between two qualitative reviewers is thought to be around 80-90%.⁹⁷ Among all the disagreed codes, the third reviewer agreed with 89% of the primary researcher's codes, in which were deemed correct codes. The new agreement between the primary researcher's and outside reviewers' codes was 95%. Also, after consultation with the research committee, *Helping at Home with Food* was added as a theme as it is an important aspect that needed to be identified. In regard to the post-focus group data, the primary researcher solely coded the post-intervention transcript since agreement was ultimately high between the primary researchers and reviewers. The primary researcher solely coded post-intervention focus group data due to high agreement on final pre-intervention focus group data.

In the second phase of analysis, the primary researcher reviewed and analyzed the pre- and post-intervention focus group transcript with the use of two matrices on Microsoft Word. The first matrix summarized within group responses and the second matrix summarized between group responses.²² Findings were then categorized and made into themes. The themes were further refined after reading the notes several times to ensure that all pertinent information was coded and no information was overlooked, which then led to the final results (Appendix I).

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C. EXTENDED RESULTS

QUANTITATIVE RESULTS

There were no significant differences between groups by age, gender, or ethnicity at baseline (Table 3). The average age of students from both groups was 10.5 years, 46% of the students were female, and 70% of students from the intervention school and 60% of students from the control school identified as Hispanic (Hispanic or Non-Hispanic defined by students reporting whether or not they speak Spanish at home). Moreover, about 22% of students in both school identified as African American, and 11% of students in the intervention and 17% of students in the control group identified as White (question on race allowed for students to check more than one response).

School and home self-efficacy measured by pre- and post-intervention surveys were analyzed using ANCOVA while adjusting for class. There were no between or within group differences in school self-efficacy. However, there was a non-significant increase in school self-efficacy among students in the intervention group from pre and post intervention (pre 3.0 ± 1.2 , post 3.2 ± 1.3). On the other hand, school self-efficacy among students from the control school stayed about the same (pre 2.7 ± 1.2 , post 2.7 ± 1.3). Because coefficient- α for school self-efficacy were low, school self-efficacy was explored as two single items, yet results remained the same (no data shown). There were no significant changes in home self-efficacy between or within groups. However, home self-efficacy was fairly high initially and remained high in both in the intervention (pre 4.3 ± 0.8 , post 4.2 ± 1.0) and control group (pre 3.9 ± 1.0 , post 4.0 ± 1.0) post-intervention (Table 4).

Knowledge on FV and PSE were measured by pre- and post-intervention surveys were analyzed using ANCOVA while adjusting for class. Knowledge of FV's were not statistically different between groups. However, knowledge on FV significantly increased within the intervention group from pre-to post-intervention (pre 0.3 ± 0.2 , post 0.3 ± 0.3 , $P < 0.05$). Knowledge of PSE did not change between nor within groups (Table 4).

Consumption of FV measured by pre- and post-intervention surveys were analyzed using ANCOVA while adjusting for class. When recalling the quantity of FV consumed the day prior to completing the survey (e.g. How many fruits (vegetables) did you eat yesterday?), consumption of fruit and consumption vegetables between groups did not significantly differ. However, there were significant increases within the intervention group (pre 2.7 ± 1.4 , post 3.2 ± 1.0 , $P < 0.01$). There were also significant increases within the control group (pre 2.0 ± 1.4 , post 3.0 ± 0.9 , $P < 0.01$). However, vegetable consumption significantly decreased within the intervention group (pre 2.0 ± 1.7 , post 1.5 ± 1.4 , $P < 0.001$) and there were no significant changes in vegetable consumption within the control group (Table 4).

Consumption variety of FV measured by survey pre- and post were analyzed using repeated analysis of variance. When accounting for consumption variety (i.e. Do you eat more than one kind of fruit (vegetable) each day?), more students consumed more than one type of fruit each day than vegetables. However, there were no significant difference between nor within groups in regard to fruit variety. Moreover, there was no significant between group difference in vegetable variety at post, but there was a significant decrease in vegetable variety among students in the intervention group from

pre- to post-intervention (intervention pre 2.3 ± 0.9 , intervention post 2.1 ± 1.1 , $p < 0.05$). (Table 4).

QUALITATIVE RESULTS

Pre-Intervention Findings

Prior to STC in the intervention school, 32 students participated in eight-focus groups. Four themes emerged throughout focus group discussions: *self-efficacy in asking for fruits and vegetables*, *outcome expectations*, *identifying asking strategies*, and *helping at home* (Table 5). Several changes have been made in consultation with the research committee. *Confidence* had changed *outcome expectations* because students had reported whether their suggestions would work or not as a result for asking for their favorite FV. Secondly, the themes *barriers/assistance and supportive environment* were eventually merged into asking *self-efficacy* since responses described students' comfortability and confidence in asking for their favorite FV. *Evaluation of STC* was added as a theme at post-intervention as students in focus groups had described their experiences with STC. Two more experts with previous experience with qualitative research reviewed the final themes and findings.

Self-Efficacy. The duration and rapport of a students' relationship with an adult determined their self-efficacy about asking for their favorite FV at school. However, if they did not know the adults at school or did not have a positive relationship with them, students had lower self-efficacy, which occurred among many of the students. At home, almost all students had high self-efficacy in asking for their favorite FV at home, and only shared their reasons why they are comfortable asking.

Outcome Expectations. About half the students reported positive *outcome expectations* as a result of asking for their favorite FV at school. Some students reported negative *outcome expectations* because adults at school may not have time to listen to their suggestions. At home, most students reported positive *outcome expectations* as a result of asking for their favorite FV because they think it is what family members would want from them. A few students did not think their suggestions would work because adults at home were busy or may not have enough money.

Identify Strategies. Students were able to make specific requests at school. However, many were hesitant to ask for their favorite FV at school they did not have prior experiences or skills in asking. At home, students all would ask an adult at home to either go to the store with the adult or some would ask to the grocery store and buy their favorite FV.

Helping at Home. Some students remembered specific times they helped prepare a meal with FV either independently or with the help of family members, but many students reporting general tasks in preparation such as cutting, washing, and cooking. A few reported cooking meals independently. Some did not help with food preparation at home.

Post-Intervention Findings

Thirty students that participated post-intervention focus groups. The same themes from the pre-intervention focus groups surfaced, which were: *self-efficacy in asking for fruits and vegetables, outcome expectations, identifying asking strategies, and helping at home*. In addition, most of the students described what they enjoyed and learned from

STC and incorporated STC activities and related knowledge into their responses throughout the focus groups.

Self-Efficacy. Self-efficacy was high in asking an adult at school for their favorite FV. The range of comfortability (based on the comfortability scale, which was only conducted during post-intervention focus groups) was between 25-100%, only one student was below 50% comfortable. Students were even more comfortable asking an adult at school with the support from friends (95-100% comfortable based on the comfort scale). Students said that as a group, they will all speak up and that they would support each other. At home, almost all students were 100% comfortable with asking a relative for their favorite FV.

Outcome Expectations. Almost all reported positive *outcome expectations* as a result of asking for their favorite FV at school, and some students incorporated activities from STC such as perceiving that adults would find two recipes and pick our favorite to add to the salad bar. Only a few reported negative *outcome expectations* because the adult at school may be busy. Almost all reported positive *outcome expectations* as a result of asking for their favorite FV at home. Some students reported negative *outcome expectations* because they perceive money to be an issue for adults at home.




Identify Strategies. Compared to the intervention students prior to STC, most students would ask specifically, and some incorporated concepts learned from STC. At home, students would either ask an adult to go to the store to get their favorite FV or asked to go to the store with them. But many agreed that going to the store with them will successfully get them what they want.

Helping at Home. Students helped prepare FV for specific meals at home either independently or with family members, and some even recalled making SNAP-Ed recipes. Students also recalled generally preparing FV such as chopping, washing, and cooking. Some students also helped teach their parents about healthy eating and shopping for food on a budget.

STC. When asked what they thought of STC at the end of some focus groups, student admitted they enjoyed voting and seeing their classmates vote on student-made recipes, getting their classmates to try new foods, and socializing with everyone in the cafeteria. Students also learned valuable lessons such as if they do not like a FV they could add something to make it taste better.

D. COGNITIVE INTERVIEWS AND SURVEY CHANGES

For 1st Cognitive Interview

<div style="display: flex; justify-content: space-between; align-items: center;"><div style="text-align: center;"><p>Student's Take Charge! Survey 2016-2017</p></div><div style="border: 1px solid black; padding: 5px; font-size: 0.8em;"><p>STAFF ONLY Date: _____ School: _____ Classroom: _____ Circle one: Pre Post ID# _____</p></div></div> <p>PLEASE PRINT</p> <p>Age: _____</p> <p>My Name is: _____ First Name Last Name</p> <p>Have you been to a URI SNAP-Ed workshop since October 1, 2016? <input type="radio"/> Yes <input type="radio"/> No</p> <p>I am a: <input type="radio"/> Boy <input type="radio"/> Girl</p> <p>I speak Spanish at home: <input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Sometimes</p> <p>I am (choose all that apply):</p> <ul style="list-style-type: none"><input type="radio"/> Asian<input type="radio"/> Black or African-American<input type="radio"/> White<input type="radio"/> American Indian or Alaskan Native<input type="radio"/> Native Hawaiian/other Pacific Islander<input type="radio"/> Other <p style="text-align: right;">NEXT PAGE →</p> <p style="text-align: center;">1</p>	<p>PART 1 DIRECTIONS: Circle the correct answer to complete the sentences.</p> <p>1. I should eat at least _____ fruits each day. 1 2 3 4 5</p> <p>2. I should eat at least _____ vegetables each day. 1 2 3 4 5</p> <p>3. Fruits and vegetables should fill up _____ of my plate. None 1/4 1/2 3/4 all</p> <p>PART 2 DIRECTIONS: Draw lines to match the color(s) with how they help your body.</p> <table border="0" style="width: 100%;"><tr><td>4. Red</td><td>Keeps your eyes healthy and skin glowing</td></tr><tr><td>5. Yellow & Orange</td><td>Helps your brain learn and remember</td></tr><tr><td>6. Green</td><td>Keeps your muscles strong and body safe from germs</td></tr><tr><td>7. Purple & Blue</td><td>Helps you go to the bathroom</td></tr><tr><td>8. Brown, Tan & White</td><td>Keeps your heart strong</td></tr></table> <p style="text-align: right;">NEXT PAGE →</p> <p style="text-align: center;">2</p>	4. Red	Keeps your eyes healthy and skin glowing	5. Yellow & Orange	Helps your brain learn and remember	6. Green	Keeps your muscles strong and body safe from germs	7. Purple & Blue	Helps you go to the bathroom	8. Brown, Tan & White	Keeps your heart strong
4. Red	Keeps your eyes healthy and skin glowing										
5. Yellow & Orange	Helps your brain learn and remember										
6. Green	Keeps your muscles strong and body safe from germs										
7. Purple & Blue	Helps you go to the bathroom										
8. Brown, Tan & White	Keeps your heart strong										
<p>PART 3 DIRECTIONS: Choose the best answer for each of the following questions.</p> <p>9. What does PSE stand for? (choose one)</p> <ul style="list-style-type: none"><input type="checkbox"/> Policy, Systems and Environmental change<input type="checkbox"/> Poor School Environment<input type="checkbox"/> Public School Exchange<input type="checkbox"/> Public School Environment <p>10. Can students be members of a School Wellness Committee? (choose one)</p> <ul style="list-style-type: none"><input type="checkbox"/> Yes<input type="checkbox"/> No<input type="checkbox"/> I don't know <p>11. Which persuasive message is trying to build trust? (choose one)</p> <ul style="list-style-type: none"><input type="checkbox"/> "Doctors recommend eating fruits and vegetables every day for good health."<input type="checkbox"/> "Peppers come in all different shapes, sizes, and colors including red, green, orange, yellow and even purple!"<input type="checkbox"/> "Carrots are a root vegetable that contain vitamin A and help your eyes."<input type="checkbox"/> "Eat a variety of colorful fruits and vegetables to feel great every day!" <p style="text-align: right;">NEXT PAGE →</p> <p style="text-align: center;">3</p>	<p>PART 4 DIRECTIONS: Think about what fruits and vegetables you ate yesterday. Yesterday was a school day. Try to remember what you ate for breakfast, lunch, dinner and snacks in school and at home.</p> <p>12. How many fruits did you eat yesterday? Do <u>not</u> include fruit juice.</p> <ul style="list-style-type: none"><input type="checkbox"/> None<input type="checkbox"/> 1<input type="checkbox"/> 2<input type="checkbox"/> 3<input type="checkbox"/> 4<input type="checkbox"/> 5 or more <div style="border: 1px dashed black; padding: 10px; text-align: center;"><p>Each of these is an example of a fruit:</p></div> <p>13. How many vegetables did you eat yesterday? Do <u>not</u> include French Fries.</p> <ul style="list-style-type: none"><input type="checkbox"/> None<input type="checkbox"/> 1<input type="checkbox"/> 2<input type="checkbox"/> 3<input type="checkbox"/> 4<input type="checkbox"/> 5 or more <div style="border: 1px dashed black; padding: 10px; text-align: center;"><p>Each of these is an example of a vegetable:</p></div> <p style="text-align: right;">NEXT PAGE →</p> <p style="text-align: center;">4</p>										

PART 5 DIRECTIONS: Choose one answer for each question.

14. Do you eat fruits or vegetables as snacks?
- ☐ No ☐ Yes, sometimes ☐ Yes, often ☐ Yes, every day
15. Do you eat more than one kind of fruit each day?
- ☐ No ☐ Yes, sometimes ☐ Yes, often ☐ Yes, every day
16. Do you eat more than one kind of vegetable each day?
- ☐ No ☐ Yes, sometimes ☐ Yes, often ☐ Yes, every day
17. Examples of fruits are apples, bananas, grapes and oranges. How much do you like to eat fruits?
- ☐ Not at all
☐ A little
☐ A lot
18. Examples of vegetables include salad, corn, broccoli, potato (but not French fries) and carrots. How much do you like to eat vegetables?
- ☐ Not at all
☐ A little
☐ A lot

NEXT PAGE →

5

PART 6 DIRECTIONS: Circle the answer that you agree with most.

	I disagree very much	I disagree a little	I am not sure	I agree a little	I agree very much
19. I think I can ask someone in my family to buy my favorite fruit or vegetable.	A	B	C	D	E
20. I think I can go shopping with my family for my favorite fruit or vegetable.	A	B	C	D	E
21. I think I can ask someone in my family to make my favorite vegetable dish for dinner.	A	B	C	D	E
22. I think I can ask someone in my family to serve my favorite fruit at dinner.	A	B	C	D	E
23. I think I can ask someone in my family to have fruits out where I can reach them.	A	B	C	D	E
24. I think I can ask someone in my family to have vegetables cut up out where I can reach them.	A	B	C	D	E
25. I think I can ask an adult in my school to offer fruits and vegetables I like to eat.	A	B	C	D	E
26. I think I can ask an adult in my school to prepare vegetables the way I like them prepared.	A	B	C	D	E
27. I think I can ask an adult in my school to serve my favorite fruit for lunch.	A	B	C	D	E
28. I think I can ask an adult at school to change foods offered in my schools.	A	B	C	D	E

Thank you!

6

For 2nd Cognitive Interview



Student's Take Charge! Survey
2016-2017

STAFF ONLY
Date: _____
School: _____
Classroom: _____
Circle one: Pre Post
ID# _____

PLEASE PRINT

Age: _____

My Name Is: _____
First Name Last Name

Have you been to a URI SNAP-Ed workshop since October 1, 2016? ☐ Yes ☐ No

I am a: ☐ Boy ☐ Girl

I speak Spanish at home: ☐ Yes ☐ No ☐ Sometimes

I am (choose all that apply):
☐ Asian
☐ Black or African-American
☐ White
☐ American Indian or Alaskan Native
☐ Native Hawaiian/other Pacific Islander
☐ Other

1

PART 1

DIRECTIONS: Circle what you think the correct answer is for each of the following questions.

1. How many fruits should you eat each day?
1 2 3 4 5

2. How many vegetables should you eat each day?
1 2 3 4 5

3. How much of your plate should be filled with fruits and vegetables?
None 1/4 1/2 3/4 all

PART 2

DIRECTIONS: Choose what you think the correct answer is for each of the following questions.

4. What does PSE stand for? (choose one)
☐ Policy, Systems and Environmental change
☐ Poor School Environment
☐ Public School Exchange
☐ Public School Environment

5. Can students be members of a School Wellness Committee? (choose one)
☐ Yes
☐ No
☐ I don't know

NEXT PAGE →

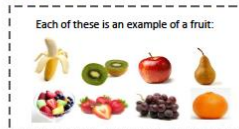
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PART 3

DIRECTIONS: Yesterday was _____. Try to remember what fruits and vegetables you ate yesterday at home and at school. This includes breakfast, lunch, dinner and snacks.

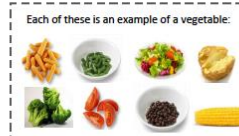
6. How many fruits did you eat yesterday? Do not include fruit juice.

☐ None
☐ 1
☐ 2
☐ 3
☐ 4
☐ 5 or more



7. How many vegetables did you eat yesterday? Do not include French Fries.

☐ None
☐ 1
☐ 2
☐ 3
☐ 4
☐ 5 or more



PART 4

DIRECTIONS: Choose one answer for each question.

8. Do you eat more than one kind of fruit each day?

☐ No ☐ Yes, sometimes ☐ Yes, often ☐ Yes, every day

9. Do you eat more than one kind of vegetable each day?

☐ No ☐ Yes, sometimes ☐ Yes, often ☐ Yes, every day

NEXT PAGE →

3

PART 5

DIRECTIONS: Circle the answer that you agree with the most.

	I disagree very much	I disagree a little	I am not sure	I agree a little	I agree very much
10. I think I can ask someone in my family to buy my favorite fruit or vegetable.	A	B	C	D	E
11. I think I can ask someone in my family to make my favorite vegetable for dinner.	A	B	C	D	E
12. I think I can ask someone in my family to serve my favorite fruit at dinner.	A	B	C	D	E
13. I think I can ask someone in my family to have <u>fruits</u> where I can get them.	A	B	C	D	E
14. I think I can ask someone in my family to have <u>vegetables</u> cut up where I can get them.	A	B	C	D	E
15. I think I can ask an adult in my school to offer fruits and vegetables I like to eat.	A	B	C	D	E
16. I think I can ask an adult at school to change foods offered in my school.	A	B	C	D	E

Thank you!

4

For 3rd Cognitive Interview



Age: _____

My Name is: _____
 First Name Last Name

PART 1

DIRECTIONS: Circle what you think the correct answer is for each of the following questions.

1. How many fruits should 4th and 5th graders eat each day?
 1 2 3 4 5

2. How many vegetables should 4th and 5th graders eat each day?
 1 2 3 4 5

3. How much of a 4th and 5th grader's plate should be filled with fruits and vegetables?
 None 1/4 1/2 3/4 all

PART 3

DIRECTIONS: Choose what you think the correct answer is for each of the following questions.

4. Which one of the following is trying to make you trust it? (choose one)
- ☐ "Doctors recommend eating fruits and vegetables every day for good health."
 - ☐ "Peppers come in all different shapes, sizes, and colors including red, green, orange, yellow and even purple!"
 - ☐ "Carrots are a root vegetable that contain vitamin A and help your eyes."
 - ☐ "Eat a variety of colorful fruits and vegetables to feel great every day!"

PART 5

DIRECTIONS: Circle the answer that you disagree or agree with the most.

	I disagree very much	I disagree a little	I am not sure	I agree a little	I agree very much
10. I think I can ask someone in my family to buy my favorite fruit or vegetable.	A	B	C	D	E
11. I think I can ask someone in my family to make my favorite <u>vegetable</u> for dinner.	A	B	C	D	E
12. I think I can ask someone in my family to serve my favorite <u>fruit</u> at dinner.	A	B	C	D	E
13. I think I can ask someone in my family to have <u>fruits</u> where I can reach them.	A	B	C	D	E
14. I think I can ask someone in my family to have <u>vegetables</u> cut up where I can reach them.	A	B	C	D	E
15. I think I can ask an adult in my school to offer fruits and vegetables I like to eat.	A	B	C	D	E
16. I think I can ask an adult at school to change foods offered in my school.	A	B	C	D	E

Timeline of Survey Changes

Items	Changes prior to CI 1	Changes prior to CI2	Changes prior to CI 3	Final changes
Original				
1. On family shopping list	Removed- some families do not have shopping lists; similar to question 2, question 2 is more relatable	---	---	---
2. Family to buy fruit				
3. Shop with family		Removed- some students reported that they do not go shopping with family and that they are unsure whether adult has enough money		
4. Pick out at store	Removed- is similar with Question 3 and more wordy; may not know what shopping basket is	---	---	---
5. Family to make veg for dinner	Underlined “vegetable”- to help focus reader on subject			
6. Family to serve fruit for dinner	Underline “fruit”- to help focus reader on subject			
7. Fruits and juices to reach	Removed “and fruit juices”- possibility of not 100% fruit juice, and fruit juices is	Underlined “fruits” Replaced “reach” to “get”- students were confused	Replaced “get” to “reach”- students associated “getting” to getting fruit at	

	categorized under fruit	(i.e. “I can reach them. I have a basket of fruit”)	the store; students also clarified whether question meant “reach”	
8. Vegetables to reach	Transferred “cut up” from before “vegetables” to after “vegetables”- refers to task for adult rather than describing the vegetable	Underlined “vegetables” Replaced “reach” to “get”- students were confused (i.e. “I would ask them” but doesn’t understand the question)	Replaced “get” to “reach”- students associated “getting” to getting fruit at the store	
9. Eat 2 or more fruit	Removed- not relevant to asking, shopping or availability	---	---	---
10. Eat 3 or more veg	Removed- not relevant to asking, shopping or availability	---	---	---
11. Eat 5 or more fruit and veg	Removed- not relevant to asking, shopping or availability	---	---	---
Added Questions				
12. School adult to offer fruit veg	Added question			
13. School adult to prepare veg	Added question to assess school self-efficacy	Removed- students reported that it is not fair to lunch ladies and other students	---	---

14. School adult to serve fruit	Added question to assess school self-efficacy	Removed- students reported that it is not fair to other students; do not want to bother lunch ladies	---	---
15. School adult to change food offered	Added question to assess school self-efficacy			

Final Survey



Student's Take Charge! Survey
2016-2017

STAFF ONLY
Date: _____
School: _____
Classroom: _____
Circle one: Pre Post
ID# _____

PLEASE PRINT

Age: _____

My Name Is: _____
First Name Last Name

Have you been to a URI SNAP-Ed workshop since October 1, 2016? ☐ Yes ☐ No

I am a: ☐ Boy ☐ Girl

I speak Spanish at home: ☐ Yes ☐ No ☐ Sometimes

I am (choose all that apply):
☐ Asian
☐ Black or African-American
☐ White
☐ American Indian or Alaskan Native
☐ Native Hawaiian/other Pacific Islander
☐ Other

OVER →

1

PART 1

DIRECTIONS: Circle what you think the correct answer is for each of the following questions.

- How many fruits should 4th and 5th graders eat each day?
1 2 3 4 5
- How many vegetables should 4th and 5th graders eat each day?
1 2 3 4 5
- How much of a 4th and 5th grader's plate should be filled with fruits and vegetables?
None 1/4 1/2 3/4 all

PART 2

DIRECTIONS: Choose what you think the correct answer is for each of the following questions.

- What does PSE stand for? (choose one)
☐ Policy, Systems and Environmental change
☐ Poor School Environment
☐ Public School Exchange
☐ Public School Environment
- Can students be members of a School Wellness Committee? (choose one)
☐ Yes
☐ No
☐ I don't know
- Which of the following sentences is trying to make you trust it? (choose one)
☐ "Doctors recommend eating fruits and vegetables every day for good health."
☐ "Peppers come in all different shapes, sizes, and colors including red, green, and orange!"
☐ "Carrots are a root vegetable that contain vitamin A and help your eyes."
☐ "Eat a variety of colorful fruits and vegetables to feel great every day!"

2

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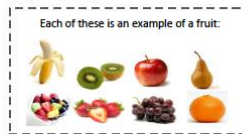
PART 3

DIRECTIONS: Yesterday was _____. Try to remember what fruits and vegetables

you ate yesterday at home and at school. This includes breakfast, lunch, dinner and snacks.

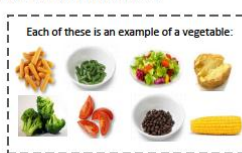
7. How many fruits did you eat yesterday? Do not include fruit juice.

- ☐ None
☐ 1
☐ 2
☐ 3
☐ 4
☐ 5 or more



8. How many vegetables did you eat yesterday? Do not include French Fries.

- ☐ None
☐ 1
☐ 2
☐ 3
☐ 4
☐ 5 or more



PART 4

DIRECTIONS: Choose one answer for each question.

9. Do you eat more than one kind of fruit each day?

- ☐ No ☐ Yes, sometimes ☐ Yes, often ☐ Yes, every day

10. Do you eat more than one kind of vegetable each day?

- ☐ No ☐ Yes, sometimes ☐ Yes, often ☐ Yes, every day

OVER →

3

PART 5

DIRECTIONS: Circle the answer that you disagree or agree with the most.

	I disagree very much	I disagree a little	I am not sure	I agree a little	I agree very much
11. I think I can ask someone in my family to buy my favorite fruit or vegetable.	A	B	C	D	E
12. I think I can ask someone in my family to make my favorite <u>vegetable</u> for dinner.	A	B	C	D	E
13. I think I can ask someone in my family to serve my favorite <u>fruit</u> at dinner.	A	B	C	D	E
14. I think I can ask someone in my family to have <u>fruits</u> where I can reach them.	A	B	C	D	E
15. I think I can ask someone in my family to have <u>vegetables</u> cut up where I can reach them.	A	B	C	D	E
16. I think I can ask an adult in my school to offer fruits and vegetables I like to eat.	A	B	C	D	E
17. I think I can ask an adult at school to change foods offered in my school.	A	B	C	D	E

Thank you!

4

E. MODERATOR GUIDES

First Pilot Focus Group

<p>Introduction</p> <ul style="list-style-type: none"> • Welcome • Names • Purpose • Duration • Informed Assent • How the focus group will be conducted • Opportunity for questions 	<p><u>Welcome</u> Hello! I'm so glad you are here today! My name is Sabrina and this is Kate and we'll be talking with you for the next 30 minutes about food. Kate will be taking notes to record the topics we will talk about today, but everything will be private. Does anyone have any questions or objections?</p> <p><u>Guidelines</u> First, I will ask some questions and after each question I will give you some time to answer out loud. I only ask that you don't talk at once, so we can hear what other have to say. There are no right or wrong answers and your answers will not be graded. I would just like you to be as truthful as possible. Again, does anyone have any questions or objections?</p>
<p>Ice Breaker</p> <ul style="list-style-type: none"> • Name tags 	<p>Now I'd like to write your first name down on the paper I have you so we can get to know each other better. Next, can anyone tell me your favorite FV that you like to eat at (home/school)? <i>Let me start: I like apples</i></p>
<p>Questions</p> <ul style="list-style-type: none"> • Identify specific foods • Identify who controls access to that food • Identify strategies for increasing frequency of food if it is an item that's appropriate • Identify additional foods that get into the broad construct on how do you change the menu that is offered/influence at home 	<p><u>Home-Based Questions</u></p> <ul style="list-style-type: none"> • (Choose first student and ask about favorite food) How often do you get to eat (favorite FV) at home? <i>Probe: you must have other FV you like. Is there a food you eat a lot of that you like?</i> • (Ask audience) Would anyone else like to share a food that they like? • Additional question for transition: who would you talk to at home to get more of it? <i>Example: I would ask my mom to get more of it</i> • How can you ask for that item from (<i>that person</i>)? <i>Probe: Do you think it usually works?</i> <i>Example: I will go to the grocery store and pick out what I want</i> • How do you help in making your favorite FV at home? <i>Probe: If you can, what would you do to help make FV?</i> <p><u>School-Based Questions</u></p> <ul style="list-style-type: none"> • Who could you talk to if you wanted to get more of these foods at school? • How would you go about asking (person at school) for more of your favorite foods?

Closing	<p>Is there anything we did not talk about that you think is important for us to know about your opinion on food? Are there any comments you would like to make?</p> <p>I'm so glad you spent time with us today. We learned a lot and it was so much fun talking with all of you. Thank you for sharing your thoughts.</p>
---------	---

Second Pilot Focus Group

Introduction <ul style="list-style-type: none"> • Welcome • Names • Purpose • Duration • Informed Consent • How the focus group will be conducted • Opportunity for questions 	<p><u>Welcome</u></p> <p>Why don't you pick out a marker and write your first name on the name tag to get started.</p> <p>Hello everyone! I'm so glad you are here today! My name is Sabrina and this is ____ and we are from the University of Rhode Island. For the next 30 minutes we'll be talking with you about food. ____ will be taking notes to record the topics we will talk about today, but everything will be private. Does anyone have any questions?</p> <p><u>Guidelines</u></p> <p>First, I will ask each of you some questions about food. After each question I will give you some time to answer out loud. I only ask that you don't talk all at once, so we can hear what others have to say. There are no right or wrong answers and your answers will not be graded. I also won't be sharing your responses with your teachers and parents. I would just like you to be as truthful as possible. Again, does anyone have any questions?</p>
Ice Breaker <ul style="list-style-type: none"> • Name tags 	<p>Let's start with getting to know each other better. Can anyone tell me your favorite food that you like to eat at home?</p> <p><i>Let me start: My favorite food at home is pasta</i></p>
Questions <i>My goal is to understand how students feel in terms of taking control of their environment in general and whether they feel their opinions are important</i> <ul style="list-style-type: none"> • Identify specific foods • Identify who controls access to that food 	<p><u>Home-Based Questions</u></p> <p>Those all sound yummy! For the rest of today though, we are going to talk about fruits and vegetables.</p> <ul style="list-style-type: none"> • Tell me which fruits and vegetables you like to eat? <i>Example if needed: I like to eat carrots, apples and mangoes</i> • So what would you say to a person at home, maybe your mom, dad, or grandparent, to let them know you would like more of (fruit/veg)? <i>Probe: What are other ways that you would ask?</i> <i>Probe: How likely is it that that person will buy that fruit/veg next time they went to the store?</i> • Sometimes, the fruits and vegetables you like to eat need to be prepared a certain way-- like cutting them or cooking them in a dish. How do you help prepare your favorite fruits and vegetables at home?

<ul style="list-style-type: none"> ● Identify strategies for increasing frequency of food if it is an item that's appropriate ● Identify additional foods that get into the broad construct on how do you change the menu that is offered/influence at home 	<p><i>Probe: What are some other ways you could help?</i> <i>Probe: Do you sometimes prepare them yourself?</i></p> <p><u>School-Based Questions</u> You are all doing a great job so far! From now on, we will be talking about eating our favorite fruits and vegetables in school, not at home.</p> <ul style="list-style-type: none"> ● What is your favorite fruit or vegetable served at school? ● What is a fruit or vegetable that you don't have too often in school that you wish you had more of? ● Let's play a game, who is the first one who can tell me an adult at school you would talk to, to get more of your favorite fruit or vegetable at lunchtime? ● Let's pretend I'm (person) and you are asking me to put (F/V) in the menu more often. What would you say to me? ● Do you think anyone would listen to your suggestion and make a change? Why or why not? <i>Probe: If they did listen, How do you know if your request worked?</i> <i>Probe: How would you feel after they put your favorite fruit or vegetable on the lunch menu?</i>
<p>Conclusion Last questions Thank you!</p>	<p>Is there anything we did not talk about that you think is important for us to know about your opinion on food? Do you have any other questions?</p> <p>I'm so glad you spent time with us today. We learned a lot and it was so much fun talking with all of you. Thank you for sharing your thoughts.</p>

Final Moderator Guide- Pre-Intervention

<p>Introduction</p> <ul style="list-style-type: none"> • Welcome • Names • Purpose • Duration • Informed Consent • How the focus group will be conducted • Opportunity for questions 	<p><u>Welcome</u></p> <p>Why don't you pick out a marker and write your first name on the name tag to get started.</p> <p>Hello everyone! I'm so glad you are here today! My name is Sabrina and this is ____ and we are from the University of Rhode Island. For the next 30 minutes we'll be talking with you about food. ____ will be taking notes to record the topics we will talk about today, but everything will be private. Does anyone have any questions?</p> <p><u>Guidelines</u></p> <p>First, I will ask each of you some questions about food. After each question I will give you some time to answer out loud. I only ask that you don't talk all at once, so we can hear what others have to say. There are no right or wrong answers and your answers will not be graded. I also won't be sharing your responses with your teachers and parents. I would just like you to be as truthful as possible. Again, does anyone have any questions?</p>
<p>Ice Breaker</p> <ul style="list-style-type: none"> • Name tags 	<p>Let's start with getting to know each other better. Can anyone tell me your favorite food that you like to eat at school?</p> <p><i>Let me start: My favorite food at school is pasta</i></p>
<p>Questions</p> <p><i>My goal is to understand how students feel in terms of taking control of their environment in general and whether they feel their opinions are important</i></p> <ul style="list-style-type: none"> • Identify specific foods • Identify who controls access to that food • Identify strategies for increasing frequency of food if it is an item that's appropriate • Identify additional foods that get 	<p><u>School-Based Questions</u></p> <p>Those all sound yummy! For the rest of today though, we are going to talk about fruits and vegetables at school.</p> <ul style="list-style-type: none"> • What is your favorite fruit or vegetable served at school? • What is a fruit or vegetable that you don't have too often in school that you wish you had more of? • Let's play a game, who is the first one who can tell me an adult at school you would talk to, to get more of your favorite fruit or vegetable at lunchtime? • Let's pretend I'm (person) and you are asking me to put (F/V) in the menu more often. What would you say to me? • Do you think anyone would listen to your suggestion and make a change? Why or why not? <i>Probe: How would you feel after they put your favorite fruit or vegetable on the lunch menu?</i> • Do you feel comfortable asking an adult at school this week to buy your favorite FV? Why or why not? <p><u>Home-Based Questions</u></p> <p>You are all doing a great job so far! From now on, we will be talking about eating our favorite fruits and vegetables in home, not at</p>

<p>into the broad construct on how do you change the menu that is offered/influence at home</p>	<p>school.</p> <ul style="list-style-type: none"> ● Tell me which fruits and vegetables you like to eat at home? ● What are some fruits and vegetables you wish you had more of at home? ● Let's play that game again. Who is the first one who can tell me an adult at home you would talk to, to get more of your favorite fruit or vegetable? ● What would you say to me, to let me know you would like more of FV at home? <i>Probe: How likely is it that they would listen to your suggestion and buy that (F/V) next time they went to the store?</i> ● Do you feel comfortable asking an adult at home this week to buy a FV you would like to eat? Why or why not? ● How do you feel if you had asked them to buy a fruit and vegetable this week and they bought it for you and your family? ● Sometimes, the fruits and vegetables you like to eat need to be prepared a certain way-- like cutting them or cooking them in a dish. How do you help prepare your favorite fruits and vegetables at home? <i>Probe: What are some other ways you help out?</i> <i>Probe: Do you sometimes prepare them yourself?</i>
<p>Conclusion Last questions Thank you!</p>	<p>Is there anything we did not talk about that you think is important for us to know about your opinion on food? Do you have any other questions?</p> <p>I'm so glad you spent time with us today. We learned a lot and it was so much fun talking with all of you. Thank you for sharing your thoughts.</p>

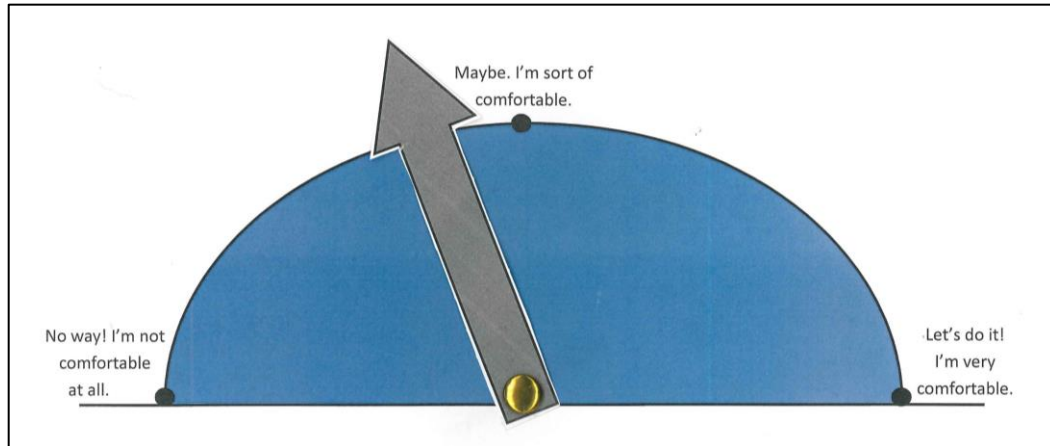
POST-INTERVENTION

<p>Introduction</p> <ul style="list-style-type: none"> • Welcome • Names • Purpose • Duration • Informed Consent • How the focus group will be conducted • Opportunity for questions 	<p><u>Welcome</u></p> <p>Why don't you pick out a marker and write your first name on the name tag to get started.</p> <p>Hello everyone! I'm so glad you are here today! My name is Sabrina and this is ____ and we are from the University of Rhode Island. For the next 30 minutes we'll be talking with you about food. ____ will be taking notes to record the topics we will talk about today, but everything will be private. Does anyone have any questions?</p> <p><u>Guidelines</u></p> <p>First, I will ask each of you some questions about food. After each question I will give you some time to answer out loud. I only ask that you don't talk all at once, so we can hear what others have to say. There are no right or wrong answers and your answers will not be graded. I also won't be sharing your responses with your teachers and parents. I would just like you to be as truthful as possible. Again, does anyone have any questions?</p>
<p>Ice Breaker</p> <ul style="list-style-type: none"> • Name tags 	<p>Let's start with getting to know each other better. Can anyone tell me your favorite food that you like to eat at school?</p> <p><i>Let me start: My favorite food at school is pasta</i></p>
<p>Questions</p> <p><i>My goal is to understand how students feel in terms of taking control of their environment in general and whether they feel their opinions are important</i></p> <ul style="list-style-type: none"> • Identify specific foods • Identify who controls access to that food • Identify strategies for increasing frequency of food if it is an item that's appropriate • Identify additional foods that get into the broad 	<p><u>School-Based Questions</u></p> <p>Those all sound yummy! For the rest of today though, we are going to talk about fruits and vegetables at school.</p> <ul style="list-style-type: none"> • What is your favorite fruit or vegetable served at school? • What is a fruit or vegetable that you don't have too often in school that you wish you had more of? • Let's play a game, who is the first one who can tell me an adult at school you would talk to, to get more of your favorite fruit or vegetable at lunchtime? • Let's pretend I'm (person) and you are asking me to put (F/V) in the menu more often. What would you say to me? • What do you think would happen if you asked an adult to put your favorite fruit or vegetable on the menu? <i>Probe: How would you feel after they put your favorite fruit or vegetable on the lunch menu?</i> • How comfortable do you feel about asking them to put it on the menu? • How would you feel if they put the item on the menu next week? • (If time) What foods do you like in the lunchroom?

<p>construct on how do you change the menu that is offered/influence at home</p>	<ul style="list-style-type: none"> ● (If time) What foods don't you like in the lunchroom? <i>Probe: why?</i> <i>Probe: what do you think you could do that might make it healthier?</i> <p><u>Home-Based Questions</u></p> <p>You are all doing a great job so far! From now on, we will be talking about eating our favorite fruits and vegetables in home, not at school.</p> <ul style="list-style-type: none"> ● Tell me which fruits and vegetables you like to eat at home? ● What are some fruits and vegetables you wish you had more of at home? ● Let's play that game again. Who is the first one who can tell me an adult at home you would talk to, to get more of your favorite fruit or vegetable? ● What would you say to me, to let me know you would like more of FV at home? <i>Probe: How likely is it that they would listen to your suggestion and buy that (F/V) next time they went to the store?</i> ● How comfortable do you feel asking an adult at home this week to buy a FV you would like to eat? ● How do you feel if you they bought it? ● Sometimes, the fruits and vegetables you like to eat need to be prepared a certain way-- like cutting them or cooking them in a dish. What sort of things do you do to help prepare foods at home? <i>Probe: What are some other ways you help out?</i> <i>Probe: Do you sometimes prepare them yourself?</i>
<p>Conclusion Last questions Thank you!</p>	<p>Is there anything we did not talk about that you think is important for us to know about your opinion on food? Do you have any other questions?</p> <p>I'm so glad you spent time with us today. We learned a lot and it was so much fun talking with all of you. Thank you for sharing your thoughts.</p>

F. ADDED COMFORTABILITY SCALE FOR POST-INTERVENTION FOCUS GROUPS

Comfort Scale associated with the question “How comfortable do you feel about asking them to put it on the menu?” (See Final Moderator Guide- Post-Intervention)



G. CODING INSTRUCTIONS

2/19/18

1 ☐ **CODING ITEMS**

Sabrina Hafner, MS Student, Dietetic Intern
University of Rhode Island
Nutrition and Dietetics

2 ☐ **LEVEL OF CONFIDENCE**

The extent of which students express that they are willing to take action and have their suggestions heard.

3 ☐

- I'm not sure if they would listen to my suggestion to add more bananas
- I know they will say no, so no point in asking.
- They would listen to my suggestion!

4 ☐ **SUPPORTIVE ENVIRONMENT**

The extent in which students perceive that adults show concern for their health, their ideas, feelings, and opinions, as well as supporting them in their decisions and suggestions

5 ☐

- Mr. Lee is respectful of what we want; Miss Debbie respects us
- Yes, Miss Medina is responsible and listens and takes our advice
- She cares for us a lot so we don't go hungry and get dehydrated
- My mom wants me to be healthy
- I feel comfortable asking them

6 ☐ **BARRIERS AND ASSISTANCE**

The extent of students ability to take action depends on factors that make it more or less possible for them to do so.

7 ☐

- Miss Debbie- she may- she doesn't have the time to cook for a lot of people; after 5th grade, lunch is over- always busy
- 75% chance they would buy it. May not have enough money for it and may need to get something else with the money
- I feel comfortable asking. My mom doesn't eat junk food, she eats healthy foods and drinks water. She buys her groceries at Whole Foods

H. CODES FOR PRE-INTERVENTION FOCUS GROUP DATA

Green = confidence

Yellow = lack of confidence

Pink = Support/respect

Red = lack of support/respect

Blue = assistance

Orange = barriers

Purple = strategies

Brown = Helping/Not Helping

Grey = Evaluation Students Take Charge

White Cells= School Environment Responses

Grey Cells= Home Environment Responses

Preliminary Coding with Primary Researcher, Outside Reviewer, and 3rd Reviewer

Green = Confidence		Yellow = Lack of Confidence	Pink = Supportive Environment	Red = Lack Supportive Environment
Yes, because fruits that we like have (apples, etc.) when we get rare stuff, kids are happy and excited to eat it “please put celery, kiwi, an grapes on menu someday soon”	I would say “please” Wish they were more fresh, check to make sure no bruises Sometimes I get hungry at home Don’t play outside anymore because cold Eat fruit and play board games think they would listen to me. I’m a good kid at home; go on computer, practice math	Only here once a month, don't know lunch ladies	Mr. Lee is very nice so if we ask nicely he will	I would be nervous, we have a substitute principal right now; Scared to ask teachers- sometimes teachers are mean and they might yell at me

Mr. Lee is very nice so if we ask nicely he will	can we get more healthy vegetables and fruits?; haven't asked yet, but I think she would listen. She tells me to eat more to get strong and healthy	I'm not sure if they would listen to my suggestion to add more bananas	they respect our opinions	Yes, because Ms. Luca is a good teacher possibly. Lunch ladies might not agree they might think they already have what the kids want
yes, they respect us, we feel comfortable having a conversation	mom and dad, may we please get some fruit and vegetables? Most of the time, mom says yes, but sometime may be too cold to go, sometimes too tired to shop because she works 3rd shift at the hospital; stay indoors and play video games; mom tells me to eat more fruits	probably, they have other stuff planned out so maybe not. Already have planned for next week, they might have some room for more fruit	They try to keep us safe and comfortable	(cafeteria ladies) up to their decision; (ms. Medina) yes, they're nice and listen to what we have to say
If we ask nicely, he will respect as a suggestion	Yes, my mom would put kale in smoothies	not right now because lunch is over	yes, they respect us, we feel comfortable having a conversation	No because I already had pears today. I probably would take a break off pears; (comfortable asking for another favorite FV this week) no not really because she might change her mind and put a different fruit
yes. She wants to get what kids like	yes because mom would respect and want me to ask her for FV	I would feel kind of comfortable because I'm not a good public speaker	yes because mom would respect and want me to ask her for FV	No, because I don't know her a lot, only a little, I would feel awkward

yes, (she knows a lot of people like it)	I would feel comfortable asking my mom because my dad can cook it and my family would enjoy it	I would be in the middle because sometimes they are really busy and sometimes they have a bunch of time	Mr. Lee is respectful of what we want; Ms. Debbie respects us	Yes. (not the lunch ladies) because they all speak spanish
Yes, I would feel comfortable because I think they would listen	I would be comfortable because my mom would want me to eat healthy and would be happy	I would be nervous, we have a substitute principal right now; Scared to ask teachers- sometimes teachers are mean and they might yell at me	If we ask nicely, he will respect as a suggestion	No, because they are really busy this week; not a good time because won't listen
Yes, because Ms. Luca is a good teacher possibly. Lunch ladies might not agree they might think they already have what the kids want	Can we go to the store and buy more fruits because we barely have them at home? They will listen if my brother doesn't hear; They will listen if they go by themselves without us as long as they don't forget	No because I'm shy	they want us to feel comfortable	
(cafeteria ladies) they may actually do it if they listen to us (Ms. Luca) yes they're nice and listen to what we have to say	Yes, he wouldn't yell if I ask for something healthier	Not comfortable asking lunch ladies because don't want to interfere they are already working hard. They make what Sodexo tells them to; (ms. Medina) yes they're nice and listen to what we have to say	yes. She wants to get what kids like	
Yes, Ms. Medina is responsible and listens and	My aunt would listen because she likes a lot of fruits and vegetables	First I would want to know the right way to say it; want to	yes, (she knows a lot of people like it)	

takes our advice		learn the right way to say it	
(cafeteria ladies) up to their decision; (ms. Medina) yes, they're nice and listen to what we have to say	Yes, because my aunt always listens to me. Unless it costs too much	Mr. Yole, can you.... (how do you feel?) shy; (why do you feel shy?) because I don't feel confident enough; (if he did ask) yes	Yes, I would feel comfortable because I think they would listen
Yes. (not the lunch ladies) because they all speak spanish	yes because she's really nice and a good listener	No- I just wouldn't want to because I don't feel comfortable enough	Yes, because my aunt always listens to me. Unless it costs too much
Not comfortable asking lunch ladies because don't want to interfere they are already working hard. They make what Sodexo tells them to; (ms. Medina) yes they're nice and listen to what we have to say	Mom, can you go to the grocery store and buy grapes and watermelon? Yes, she would listen because she's a good listener	No because I already had pears today. I probably would take a break off pears; (comfortable asking for another favorite FV this week) no not really because she might change her mind and put a different fruit	yes because she's really nice and a good listener
(Ms. Luca would listen), can ask her privately if can't hear in cafeteria	Yes, because I would be getting fruits and my mom would be happy	Ms Debbie- she may- (why maybe) she doesn't have the time has to cook for a lot of people; after 5th grade, lunch is over- always busy	Yes, because Ms. Luca is a good teacher possibly. Lunch ladies might not agree they might think they already have what the kids want
(Cafeteria ladies) are really nice and listen to us (ms. Luca) yes they're nice and they listen	When I want something, my parents will get it for me	Kind of- I don't know if she has time; if time- yes; (after Cesar's response) He will probably be	(cafeteria ladies) they may actually do it if they listen to us (Ms. Luca) yes they're nice and listen to what we have to say

to what we have to say		afraid alone in the cafeteria	
I think she would because she is a helper, so she would use suggestion to put fruits on lunch menu; so she would say to them please more oranges	Daddy, when you can, can we go to market to buy FV? 55% he would say yes, other 45% wouldn't because bones hurt and has high BP; usually go to store with dad to take care of him; he would listen even if I didn't go	Maybe, like what Kenny said she's busy a lot too	(cafeteria ladies) up to their decision; (ms. Medina) yes, they're nice and listen to what we have to say
Yes, I know her since 3rd grade, she is really good person and would do it; (how would you feel if she did do it?) happy and would say thank you	yes, my mom/dad say whatever I need they are here for me	I would say yes (student put one thumb up, side, down) - thumb side because not sure what she will say	(Cafeteria ladies) are really nice and listen to us (ms. Luca) yes they're nice and they listen to what we have to say
(if confident enough would he listen to your suggestion...) yes, probably do it	mom, please when you have the chance can you go get more grapes, mangoes, other fruits; 90% of time she would, other times she's on phone, working, picking up siblings	I think she wouldn't because just one person	I think she would because she is a helper, so she would use suggestion to put fruits on lunch menu; so she would say to them please more oranges
Yes, because she's lunch teacher so she would have to put	yes, mom mom goes every 2 weeks to get FV, she will go once a week to get what we need; brother has allergies and needs specific food	No, because I don't know her a lot, only a little, I would feel awkward	Yes, I know her since 3rd grade, she is really good person and would do it; (how would you feel if she did do it?) happy and would say thank you

Yes, because she has a big heart for people she cares about (I said, what would you ask?) If she could talk to lunch ladies to add it (I said, why ask her and not lunch lady?) no reason	I would, because we go to the supermarket almost every week. It would be a good time to ask	Can you people please... I would be kind, but I don't know... Can you please put more grapes and apples on menu?.... Would need to practice before asking	Yes, because she's lunch teacher so she would have to put
Yes, because she's the only teacher that I like and care about. I like her a lot	Yes, because they always listen to me, and say okay they want me to be happy always	I'm not sure what to say. We are nervous guy (referring to Elian)... can you please add this more to the menu?	Ms. Debbie; she is one of the nicest lunch ladies in school. They all pick Ms. Debbie
Yes, because I would say it in a kind way; lunch ladies like kindness; if they give you a tray they say thank you	I would ask my mom, can you please buy me some lychee; yes, if I ask nicely	Not sure, because they may say they cant buy or order it	Ms. Debbie- I think she would listen because she cares about kids
Yes, let me think. Because they are kind and helpful with what they put on food menu	Yes, always; because they are always getting my back or when I need help, and they are part of my family	Same as Geara, she knows it won't last a while- (would she buy it) she would be it sometimes; if we have stuff she won't go buy it again until it runs out	I feel comfortable, because I know her a long time and won't be shy
Yes, I think so, I'd just say yes because banana is my second favorite fruit so I would feel comfortable	Abuela, can you please get more kiwi because she knows me well; she would buy stack of kiwi; (is she the only person who does the grocery	Dad can you please buy me some mango and pineapple; maybe because he has a lot of stuff to do; he does the grocery shopping; with	Yes, because she has a big heart for people she cares about (I said, what would you ask?) If she could talk to lunch ladies to add it (I said,

asking to put on menu	shopping?) no my mom, grandma, uncle, second family- all go shopping- mostly the girls)	my mom, she be like 'can you please go grocery shopping?' he says he will go tomorrow; he has a lot of stuff to do	why ask her and not lunch lady?) no reason
Yes, because they are kind and would do anything to make us happy	Of course, I'm addicted to watermelon; I'm comfortable because I know her, I'm nephew and son, see her a lot and close	No, because they are really busy this week; not a good time because won't listen	Yes, because she's the only teacher that I like and care about. I like her a lot
I think they would say yes	Can I porfavor have mangoes; yes when I ask	I would ask my mom- when you go shopping again, can I have grapes? She will think about it, buy it every month because the grapes may feel nasty	I would say if you go out to the store again can you get more oranges? Very nice, gets what I ask for; she would listen
Yes , because they are really kind- 2 gym teachers (why not ask another adult?) I would but used to ask gym teacher	Yes, I'm comfortable because my mom, usually I go with her and tell her can we get mango and will go and get it	Can I go to the store with you so you can get the fruits I want? All depends because she only has so much groceries can't buy extra (I asked, how are ways to get her to listen?) ask her before she does	Yes, because I'm her favorite, every time she goes and I ask her for it she gets it
Yes, very kind	I feel comfortable, because I know her a long time and won't be shy	Yes, because she goes to the store and I go with her and ask her for it and she says yes (If you don't go to the store with her, do you think she will remember to get	Yes, let me think. Because they are kind and helpful with what they put on food menu

		it for you?) sometimes	
Yes, because I wouldn't be nervous to tell them (do you think it will work?) yeah	Because we talk about what we eat- I tell her I love to eat grapes and she will get them	Mom for dinner I want potato and corn; most of the time no, she is very strict about what she has "cheap"	Yes, because they are really friendly
Ms. Debbie- I think she would listen because she cares about kids	Yes, because we go this week		Yes, because they are kind and would do anything to make us happy
Yes, I am nervous but I need to say because I don't always like what they have;(would you ask this week?) yes; If you talk to them, won't be nervous. We need a little cheer to do it. (who will cheer?) probably Marques	Yes, because I'm her favorite, every time she goes and I ask her for it she gets it		My parents care about my health
	Yeah, because this week I've been trying to stay low in carbs (I said, why?) because I've been playing basketball; (I said, coach tell you?) Yes		Daddy, when you can, can we go to market to buy FV? 55% he would say yes, other 45% wouldn't because bones hurt and has high BP; usually go to store with dad to take care of him; he would listen even if I didn't go
	Yes, because she goes to the store		yes, my mom/dad say

and I go with her and ask her for it and she says yes (If you don't go to the store with her, do you think she will remember to get it for you?) sometimes	whatever I need they are here for me
Could you please buy more strawberries when you go to shop? (will she listen?) Yes, because I'm her favorite. I think so; (why wouldn't she?) If too many items or groceries she wouldn't buy any; have 50 cents maybe not buy a fruit (what would you do to get her to buy more?) maybe save some money to buy some fruits for me	Yes, because they always listen to me, and say okay they want me to be happy always
Yes, because sometimes she goes buy only once a week or if we have low resources, because I'm the 4th brother and 2 sisters so 8 people and stuff goes quickly. (what resources are you talking about?) things (he listed food items)	Yes, always; because they are always getting my back or whn I need help, and they are part of my family
Yes, because she cares for us a lot	Of course, I'm addicted to

so we don't go out of hunger and get dehydrated
Yes, depends if we go with her, because we want to stay healthy
If you have time, can you bring me to market to buy mangoes? Sometimes he has time or doesn't because of work. So now I ask my dad... (Do you think he would get it for you if you didn't go to the store with him?) Yes, If I didn't go to the store he would still listen
Yes, because I trust my dad
Yes, because they are really friendly
mom can I please have some more apples? Uncle, excuse me are you going to buy corn this week? (would mom say yes?) yes, if she thinks I'm serious
I know they respect my suggestions and

watermelon; I'm comfortable because I know her, I'm nephew and son, see her a lot and close
Yes, I'm comfortable because my mom, usually I go with her and tell her can we get mango and will go and get it
Yes, because she cares for us a lot so we don't go out of hunger and get dehydrated
Yes, because I trust my dad

grandma would use left over carrots
mom when you have the opportunity, can you go to market to get mango; 70% of time she is likely; other 30% she's busy with work

Blue = Assistance	Orange= Barrier	Purple = Identifying Strategies		Brown (Added Later) = Helping at Home
I know some people in school that like kiwi 25% of 4th grade, like kiwi, some 5th graders like kiwi	probably, they have other stuff planned out so maybe not. Already have planned for next week, they might have some room for more fruit	Mr. Lee is very nice so if we ask nicely he will	I would say "please" Wish they were more fresh, check to make sure no bruises Sometimes I get hungry at home Don't play outside anymore because cold Eat fruit and play board games think they would listen to me. I'm a good kid at home; go on computer, practice math	Last summer at grandpas I helped grandma cut potatoes/carrots Apples, potatoes, strawberries
because I want to be more healthy	I would be nervous, we have a substitute principal right now; Scared to ask teachers- sometimes teachers are mean and they might yell at me	If we ask nicely, he will respect as a suggestion	Mom, can you please buy me pineapple, carrots, and strawberries; she only doesn't if I ask her in a nice manner	
watermelon is a healthy snack and a lot of kids like it	excuse me, can you tell them to put mango as one of the fruit;	sometimes kids are not taking FV , you should take survey to	I would ask my mom, can you please buy me some lychee;	I eat fruits fresh when comes to veggies I help my mom chop

	(asked why you would ask Ms. Medina to ask the lunch ladies and not yourself) wouldn't ask lunch ladies because they are too nice and I don't want to offend them	add the ones they like to the menu	yes, if I ask nicely	up like pumpkin- I help take off skin, chop up and cook Bananas and strawberries- help cut up to make smoothies
I would be in the middle because sometimes they are really busy and sometimes they have a bunch of time	Not comfortable asking lunch ladies because don't want to interfere they are already working hard. They make what Sodexo tells them to; (ms. Medina) yes they're nice and listen to what we have to say	(Ms. Luca would listen), can ask her privately if can't hear in cafeteria	Can I go to the store with you so you can get the fruits I want? All depends because she only has so much groceries can't buy extra (I asked, how are ways to get her to listen?) ask her before she does	for my birthday- we had aunties beef stew- carrots/potatoes chopped up- I chopped the carrots/potatoes
Yes, let me think. Because they are kind and helpful with what they put on food menu	Maybe, like what Kenny said she's busy a lot too	First I would want to know the right way to say it; want to learn the right way to say it	Could you please buy more strawberries when you go to shop? (will she listen?) Yes, because I'm her favorite. I think so; (why wouldn't she?) If too many items or groceries she wouldn't buy any; have 50 cents maybe not buy a fruit (what would you do to get her to buy more?) maybe save some money to buy some fruits for me	wash veggies, slice, boil
mrs. Waterman; cafeteria lady	I would say yes (student put one thumb up, side,	Yes, because she has a big heart for people she	can we get more healthy vegetables and	I wash before I eat it and cut it; if broccoli, my

who gives us choice	down) - thumb side because not sure what she will say	cares about (I said, what would you ask?) If she could talk to lunch ladies to add it (I said, why ask her and not lunch lady?) no reason	fruits?; haven't asked yet, but I think she would listen. She tells me to eat more to get strong and healthy	mom would wash it and put in pot to cook; help most of the time
We are making healthy choices for other kids, we want them to be healthy	I think she wouldn't because just one person	Yes, because I would say it in a kind way; lunch ladies like kindness; if they give you a tray they say thank you	mom and dad, may we please get some fruit and vegetables? Most of the time, mom says yes, but sometime may be too cold to go, sometimes too tired to shop because she works 3rd shift at the hospital; stay indoors and play video games; mom tells me to eat more fruits	I help mom and dad cook; chop peppers/lettuce, boil water, peel potatoes, put in water and add salt
I would say "please" Wish they were more fresh, check to make sure no bruises Sometimes I get hungry at home Don't play outside anymore because cold Eat fruit and play board games think they would listen to me. I'm a good kid at home; go on	Can I go to the store with you so you can get the fruits I want? All depends because she only has so much groceries can't buy extra (I asked, how are ways to get her to listen?) ask her before she does	Can we have more bananas on Monday/Thursday?	may we please get kale at the store; step-dad wants me to make healthy choices	help grandma cook; I'll wash and cut veggies and peel potatoes

computer, practice math				
can we get more healthy vegetables and fruits?; haven't asked yet, but I think she would listen. She tells me to eat more to get strong and healthy	Could you please buy more strawberries when you go to shop? (will she listen?) Yes, because I'm her favorite. I think so; (why wouldn't she?) If too many items or groceries she wouldn't buy any; have 50 cents maybe not buy a fruit (what would you do to get her to buy more?) maybe save some money to buy some fruits for me	may we please have more strawberries/apples/bananas	please go to the store; mom wants us to be healthy	peel mango and cut up for snack or side dish Sometimes I cook dinner. I cook steak, fried fish, white rice, pancakes
mom and dad, may we please get some fruit and vegetables? Most of the time, mom says yes, but sometime may be too cold to go, sometimes too tired to shop because she works 3rd shift at the hospital; stay indoors and play video games; mom tells me to eat more fruits	Not sure, because they may say they cant buy or order it	Principal, boss of school; he could tell lunch lady to order FV	please get more carrots; Grandma wants us to have healthy foods in our bodies	wash fruit, make blueberry pancakes; I help most of the time; I cook breakfast when they wake up late
may we please get kale at the store; step-dad wants me to	I would ask my mom- when you go shopping again, can I have grapes? She will	can we have more kiwi on Tuesday/Wednesday/Friday?	can we buy more fruits like mango/tangerine . My mom	wash/peel mango; I help most of the time

make healthy choices	think about it, buy it every month because the grapes may feel nasty		always listens to me	
Yes, my mom would put kale in smoothies	mom and dad, may we please get some fruit and vegetables? Most of the time, mom says yes, but sometime may be too cold to go, sometimes too tired to shop because she works 3rd shift at the hospital; stay indoors and play video games; mom tells me to eat more fruits	can we have more apples Monday and kiwi on Friday? Friday is pizza day; Monday we had fish and sweet potato fries (last time we had kiwi and grapes)	Can we go to the store and buy more fruits because we barely have them at home? They will listen if my brother doesn't hear; They will listen if they go by themselves without us as long as they don't forget	wash grapes and help with dishes
yes, they respect us, we feel comfortable having a conversation	I would be happy because I love fruit but wouldn't share with my brother because he would eat all of it	can we have kiwi and celery for snack	Mom, can you go to the grocery store and buy grapes and watermelon? Yes, she would listen because she's a good listener	cut my oranges in 4 pieces (dad does) I like to make banana milkshake supervised 3x/week
please go to the store to get more FV;mom very likely to because she wants us to be healthy	Yes, because my aunt always listens to me. Unless it costs too much	Mr. Lee, please try to acquire pomegranate for lunch or snack	If you have time when you're not busy, can you take me to the market to get grapes; she would still listen if she went without me	I help my mom and dad because we include FV in all meals; I cook, slice, peel them, sometimes mash
please go to the store; mom wants us to be healthy	I would be happy but my mom would eat all of it	Miss Debbie, try to get more pomegranate at school	mom when you have the opportunity, can you go to market to get mango; 70% of time she is likely; other 30% she's busy with work	With apples, oranges, mangoes, mom and dad slice them because we can't use knives, with mushrooms we eat them cooked with rice

				and sometimes brother eats them alone; will ask mom or dad to juice, dad always in the kitche (doesn't help)
please get more carrots; Grandma wants us to have healthy foods in our bodies	Daddy, when you can, can we go to market to buy FV? 55% he would say yes, other 45% wouldn't because bones hurt and has high BP; usually go to store with dad to take care of him; he would listen even if I didn't go	Miss Debbie, can you please put pomegranate for students to eat at lunch	Daddy, when you can, can we go to market to buy FV? 55% he would say yes, other 45% wouldn't because bones hurt and has high BP; usually go to store with dad to take care of him; he would listen even if I didn't go	my mom is doing the preparation so I help set up
I know they respect my suggestions and grandma would use left over carrots	mom, please when you have the chance can you go get more grapes, mangoes, other fruits; 90% of time she would, other times she's on phone, working, picking up siblings	Miss Debbie to get more pomegranate	mom, please when you have the chance can you go get more grapes, mangoes, other fruits; 90% of time she would, other times she's on phone, working, picking up siblings	first open the water and rinse so all bacteria would go away; sometimes when I get home from school and mom is doing dinner I help her
can we buy more fruits like mango/tangerine. My mom always listens to me	yes, mom mom goes every 2 weeks to get FV, she will go once a week to get what we need; brother has allergies and needs specific food	Ms. Debbie, we don't get a lot of corn/watermelon here it would be great to add to menu	Mom, can you please buy me pineapple, carrots, and strawberries; she only doesn't if I ask her in a nice manner	First, I wash the dishes and put lychee in it and wash and eat them; most of the time
I would be comfortable because my mom would want me to eat healthy and	I think she would because she is a helper, so she would use suggestion to put fruits on lunch	could you add more watermelon/grapes because they are good?	I would, because we go to the supermarket almost every week. It would	Cut it, grab blender, kiwi, peel strawberry, drop it with ice (do you do that often?) not a lot

would be happy	menu; so she would say to them please more oranges		be a good time to ask	because I don't have kiwi, (responding to Cesar) need ice with smoothie- to be cold and chunky
Can we go to the store and buy more fruits because we barely have them at home? They will listen if my brother doesn't hear; They will listen if they go by themselves without us as long as they don't forget	Dad can you please buy me some mango and pineapple; maybe because he has a lot of stuff to do; he does the grocery shopping; with my mom, she be like 'can you please go grocery shopping?' he says he will go tomorrow; he has a lot of stuff to do	Excuse me, can you please tell the lunch ladies they should have mangoes as snack; (asked why not ask the lunch ladies) they work all day and try their hardest to make what we want	Well I always say mommy, can you please buy me some grapes? She does when I say please	I peel mango, cut strawberries, put ice in water
Yes, he wouldn't yell if I ask for something healthier	No, because they are really busy this week; not a good time because won't listen	Excuse me, do you mind telling the lunch ladies to put broccoli in the salad bar	Dad can you please buy me some mango and pineapple; maybe because he has a lot of stuff to do; he does the grocery shopping; with my mom, she be like 'can you please go grocery shopping?' he says he will go tomorrow; he has a lot of stuff to do	We eat broccoli with cheese: we put water in hot pot, add broccoli, add cheese (me, mom, big sister)
My aunt would listen because she likes a lot of fruits and vegetables	I think she wouldn't because just one person	excuse me, can you tell them to put mango as one of the fruit; (asked why you would ask Ms. Medina to ask the lunch ladies	Abuela, can you please get more kiwi because she knows me well; she would buy stack of kiwi; (is she the only person who does	I would wash them, chop them, and eat; one of my sisters helps me. (how often do you do that?)

		and not yourself) wouldn't ask lunch ladies because they are too nice and I don't want to offend them	the grocery shopping?) no my mom, grandma, uncle, second family- all go shopping- mostly the girls)	sometimes, when I need help
Mom, can you go to the grocery store and buy grapes and watermelon? Yes, she would listen because she's a good listener	Can I go to the store with you so you can get the fruits I want? All depends because she only has so much groceries can't buy extra (I asked, how are ways to get her to listen?) ask her before she does	Can you put mangoes in the salad bar or snack?	Can I porfavor have mangoes; yes when I ask	Grapes- wash them put in bowl; apple- wash off; cabbage-help grandma with washing and no dirt inside holes
Yes, because I would be getting fruits and my mom would be happy	Could you please buy more strawberries when you go to shop? (will she listen?) Yes, because I'm her favorite. I think so; (why wouldn't she?) If too many items or groceries she wouldn't buy any; have 50 cents maybe not buy a fruit (what would you do to get her to buy more?) maybe save some money to buy some fruits for me	may you please put more apples in the menu	Yes, I'm comfortable because my mom, usually I go with her and tell her can we get mango and will go and get it	cutting the celery, oranges, peel the carrots (I asked, do you do it by yourself?) yes, with my brother (I asked, how often?) on saturdays and sundays because my mom doesn't let us bring food to school
If you have time when you're not busy, can you take me to the market to get grapes; she would still	Yes, because sometimes she goes buy only once a week or if we have low resources, because I'm the 4th brother and 2	Hi Ms. Maria, can you please put more orange in the food thing... menu. Because I like them and want to eat them more	I would ask my mom- when you go shopping again, can I have grapes? She will think about it, buy it every month because	my mom doesn't; I do breakfast and lunch my mom is too lazy; self-cut everything because of YouTube; mom

listen if she went without me	sisters so 8 people and stuff goes quickly. (what resources are you talking about?) things (he listed food items)		the grapes may feel nasty	said to learn how to do things my own; snack and dinner- mom does
Yes, because they always listen to me, and say okay they want me to be happy always	If you have time, can you bring me to market to buy mangoes? Sometimes he has time or doesn't because of work. So now I ask my dad... (Do you think he would get it for you if you didn't go to the store with him?) Yes, If I didn't go to the store he would still listen	may you put pears on menu more often?	I would tell my mom what fruit or vegetable I want and she would get it; yes because she loves me	When mom makes food, I ask her to cut my fruit and peel apples; I ask her to cut it for me; she helps when I cut by myself she watches me; only small thing because dangerous
Because we talk about what we eat- I tell her I love to eat grapes and she will get them	Mom for dinner I want potato and corn; most of the time no, she is very strict about what she has "cheap"	I would say I am asking if you could please add watermelon to the area- where they have all fruits... salad bar	I would say if you go out to the store again can you get more oranges? Very nice, gets what I ask for; she would listen	apple- wash it and eat it, take off sticker; grapes- read bag and if it has seeds and wash; orange- peel (by yourself?) yes- sometimes mom does; helped my grandpa chop wood (indicated he can do things himself)
I would say if you go out to the store again can you get more oranges? Very nice, gets what I ask for; she would listen	may I have potatoes please; when fridge is full she says lets finish until fridge is empty	I would ask; Hi I was wondering if we could get more grapes because they're my favorite	Can I go to the store with you so you can get the fruits I want? All depends because she only has so much groceries can't buy extra (I asked, how are ways to get her to listen?) ask	make smoothies (do you do it yourself?) yes- help from mom

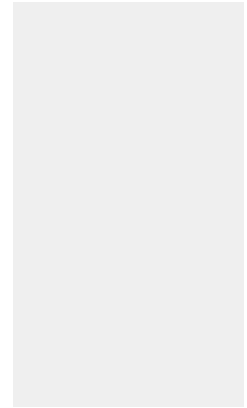
			her before she does	
Yes, because I'm her favorite, every time she goes and I ask her for it she gets it	Same as Geara, she knows it won't last a while- (would she buy it) she would be it sometimes; if we have stuff she won't go buy it again until it runs out	say same as Julisa but with watermelon	Yes, because she goes to the store and I go with her and ask her for it and she says yes (If you don't go to the store with her, do you think she will remember to get it for you?) sometimes	
Could you please buy more strawberries when you go to shop? (will she listen?) Yes, because I'm her favorite. I think so; (why wouldn't she?) If too many items or groceries she wouldn't buy any; have 50 cents maybe not buy a fruit (what would you do to get her to buy more?) maybe save some money to buy some fruits for me	Low on veggies at home- strawberries, grapes, lettuce, potatoes	I would say I would ask her for more fruit and vegetables	Could you please buy more strawberries when you go to shop? (will she listen?) Yes, because I'm her favorite. I think so; (why wouldn't she?) If too many items or groceries she wouldn't buy any; have 50 cents maybe not buy a fruit (what would you do to get her to buy more?) maybe save some money to buy some fruits for me	
Yes, depends if we go with her, because we want to stay healthy		I would say can you please put more cucumbers in the snack	If you have time, can you bring me to market to buy mangoes? Sometimes he has time or doesn't because of work. So now I ask my dad... (Do you think he	

<p>If you have time, can you bring me to market to buy mangoes? Sometimes he has time or doesn't because of work. So now I ask my dad... (Do you think he would get it for you if you didn't go to the store with him?) Yes, If I didn't go to the store he would still listen</p>
<p>Yeah, because this week I've been trying to stay low in carbs (I said, why?) because I've been playing basketball; (I said, coach tell you?) Yes</p>
<p>Abuela, can you please get more kiwi because she knows me well; she</p>

	<p>would get it for you if you didn't go to the store with him?) Yes, If I didn't go to the store he would still listen</p>
<p>Could you please put more bananas on the menu, please</p>	<p>Mom for dinner I want potato and corn; most of the time no, she is very strict about what she has "cheap"</p>
<p>May you please.. I would ask her if she can tell lunch ladies to add to lunch menu, so we can know they add it. I usually ask Ms. Macaroy more- she buys stuff at the store (I ask, why do you ask her more often?) she is the one I share my foods with</p>	<p>may I have potatoes please; when fridge is full she says lets finish until fridge is empty</p>
<p>I would say I have a request to add more strawberries to the menu</p>	<p>mom can I please have some more apples? Uncle, excuse me are you going to buy</p>

would buy stack of kiwi; (is she the only person who does the grocery shopping?) no my mom, grandma, uncle, second family- all go shopping- mostly the girls)		corn this week? (would mom say yes?) yes, if she thinks I'm serious	
	May I have more peppers		
	Can you people please... I would be kind, but I don't know... Can you please put more grapes and apples on menu?.... Would need to practice before asking		
	Yes, I am nervous but I need to say because I don't always like what they have;(would you ask this week?) yes; If you talk to them, won't be nervous. We need a little cheer to do it. (who will cheer?) probably Marques		
	I'm not sure what to say. We are nervous guy (referring to Elian)... can you please add this more to the menu?		

Yes, because fruits that we like have (apples, etc.) when we get rare stuff, kids are happy and excited to eat it “please put celery, kiwi, an grapes on menu someday soon”



MATRIX 1: Pre-Intervention

Questions	Jose	Josh	Yandell	Chris	Initial Codes
Favorite food	Sandwich, pizza	Salad, meatball sub	Turkey w/mashed potato	Apple, Salad, celery, hotdogs	All said a food they like
Favorite fruit or vegetable served at school	bananas	apple, oranges, bananas, lettuce	apples	celery	All said fruit or vegetable
What is a fruit or vegetable that you don't have too often in school	bananas	bananas	don't like vegetables	kiwi	All said fruit

that you wish you had more of?					
Who can tell me an adult at school you would talk to, to get more of your favorite fruit or vegetable at lunchtime ?	Only here once a month, don't know lunch ladies	Principal, boss of school; he could tell lunch lady to order FV	Ms. Debbie, the lunch lady		Students would ask lunch either lady or principal (to ask lunch lady)
What would you say to me?	Can we have more bananas on Monday/Thursday?	can we have more kiwi on Tuesday/Wednesday/Friday ?	can we have more apples Monday and kiwi on Friday? Friday is pizza day; Monday we had fish and sweet potato fries (last time we had kiwi and grapes)	can we have kiwi and celery for snack	All would know what to say and would ask adult for fruit or vegetable on specific days or meals
Do you think anyone would listen to your suggestion and make a change? Why or why not?	I'm not sure if they would listen to my suggestion to add more bananas	I know some people in school that like kiwi 25% of 4 th grade, like kiwi, some 5 th graders like kiwi	probably, they have other stuff planned out so maybe not. Already have planned for next week, they might have some room for more fruit	Yes, because fruits that we like have (apples, etc.) when we get rare stuff, kids are happy and excited to eat it "please put celery, kiwi, an grapes on menu someday soon"	Some were not sure that adult would listen to them because they already have stuff planned, and one thought adult would listen because it would

					make kids happy
Do you feel comfortable asking an adult at school this week to buy your favorite FV?	Yes	We are making healthy choices for other kids, we want them to be healthy	because I want to be more healthy	not right now because lunch is over	Most were comfortable because they either wanted themselves or others healthy
Favorite FV at home?	strawberries, apples, bananas	apples, bananas, kiwis, oranges, pomegranates, strawberry, blueberries, blackberries	apples, passionfruit, pomegranate, starfruit, bananas, juice that they sell too	apples, bananas, oranges, carrots, mangoes, coconut, celery	All mention fruit or vegetable
FV you wish you had more of?	passionfruit and pomegranate	passionfruit and pomegranate	passionfruit and pomegranate	passionfruit and pomegranate; has to ask mom first because she may already have a plan	All said fruit One considered that before asking, mom may already have plan
Adult at home you would talk to, to get more FV?	any adult	dad	mom/grandma/aunt	anyone	They would either ask relatives or any adult at home
What would you say to me? Would they listen to your suggestion?	may we please have more strawberries /apples/bananas	I would say "please" Wish they were more fresh, check to make sure no bruises Sometimes I get hungry at home Don't play outside anymore because cold	can we get more healthy vegetables and fruits?; haven't asked yet, but I think she would listen. She tells me to eat more to get strong and healthy	mom and dad, may we please get some fruit and vegetables? Most of the time, mom says yes, but sometime may be too cold to go, sometimes too tired to shop because she works 3rd	They all know what they would say and most would say please can we have fruit and vegetables (they would either ask to go to the

		Eat fruit and play board games think they would listen to me. I'm a good kid at home; go on computer, practice math		shift at the hospital; stay indoors and play video games; mom tells me to eat more fruits	store with adult or have adult go get it). Most can explain a reason why adult would or would not listen to them.
Do you feel comfortable asking adult to buy FV this week?					Not asked
How do you feel if you had asked them to buy a FV this week and they bought it for you and fam?	good	excited	excited	excited	The kids would be excited. During the focus groups the kids said this while smiling; this perked the students up
Prepare fruits and veg?	Last summer at grandpas I helped grandma cut potatoes/carrots Apples, potatoes, strawberries	Sometimes aunt makes watermelon into shapes (flowers); I like to do trick with bananas, cut in 1/2	I eat fruits fresh when comes to veggies I help my mom chop up like pumpkin- I help take off skin, chop up and cook Bananas and strawberries- help cut up to make smoothies	for my birthday- we had aunties beef stew- carrots/potatoes chopped up- I chopped the carrots/potatoes	Students remembered specific times when they helped prepare foods (cut, chop) at home. Students seemed engaged and elated in sharing their stories about specific times they made FV.

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Questions	Deana	Giana	Leylani	Jalissa	Initial codes
Favorite food	corndog	chicken nuggets	chicken and waffles	chicken nuggets	All said food they like
Favorite fruit or vegetable served at school	orange	pomegranate	orange	pineapple	All said fruit
What is a fruit or vegetable that you don't have too often in school that you wish you had more of?	pomegranate	pomegranate	pomegranate	pomegranate	All said fruit
Who can tell me an adult at school you would talk to, to get more of your favorite fruit or vegetable at lunchtime?	principal	ms. Debbie	ms. Debbie	ms. Debbie	The students would either ask principal or lunch lady.
What would you say to me?	Mr. Lee, please try to acquire pomegranate for lunch or snack	Miss Debbie, try to get more pomegranate at school	Miss Debbie, can you please put pomegranate for students to eat at lunch	Miss Debbie, get more pomegranate	All would know what to say to ask for FV in general or specific meals; some would say please.

Do you think anyone would listen to your suggestion and make a change? Why or why not?	Mr. Lee is very nice so if we ask nicely he will	They try to keep us safe and comfortable	Mr. Lee is respectful of what we want; Ms. Debbie respects us	If we ask nicely, he will respect as a suggestion	They all thought adult would listen to them because they respected them, made them comfortable, and because they would ask nicely.
Do you feel comfortable asking an adult at school this week to buy your favorite FV?	they respect our opinions	yes, they respect us, we feel comfortable having a conversation		they want us to feel comfortable	They were all comfortable asking because they were comfortable with adults and adults respected their opinions.
Favorite FV at home?	carrots; we always have them; mom cooks with them	apples	oranges- everyday after school	grapes- we always have them	All said either a fruit or vegetable.
FV you wish you had more of?	kale/salad/spinach; sour kale type vegetable	broccoli (mom cooks but not a lot)	salad	carrots	All said they wished they had more vegetables
Adult at home you would talk to, to get more FV?	step dad	mom	mom	grandma	They would all ask relatives

What would you say to me? Would they listen to your suggestion?	may we please get kale at the store; step-dad wants me to make healthy choices	we please go to the store to get more FV;mom is very likely to because she wants us to be healthy	please go to the store; mom wants us to be healthy	please get more carrots; Grandma wants us to have healthy foods in our bodies	They all would ask adult to please go to the store and get more FV. Relatives would listen to them because they want them to be healthy.
Do you feel comfortable asking adult to buy FV this week?	Yes, my mom would put kale in smoothies	yes because mom would respect and want me to ask her for FV	I would feel comfortable asking my mom because my dad can cook it and my family would enjoy it	I know they respect my suggestions and grandma would use left over carrots	All were comfortable asking an adult at home for FV because adult would respect their suggestions , the family would enjoy it or use it for other things too.
How do you feel if you had asked them to buy a FV this week and they bought it for you and fam?					

Prepare fruits and veg?	wash veggies, slice, boil	I wash before I eat it and cut it; if broccoli, my mom would wash it and put in pot to cook; help most of the time	I help mom and dad cook; chop peppers/lettuce, boil water, peel potatoes, put in water and add salt	help grandma cook; I'll wash and cut veggies and peel potatoes	They reported preparing food in general and that they helped adult help wash, slice, boil, cut, peel
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Questions	Jaelisa	Xavier	Allen	Aniris	Initial Codes
Favorite food	shepherd's pie	shepherd's pie	tacos	tacos	All mentioned favorite food
Favorite fruit or vegetable served at school	peaches	green apple	oranges	grapes	All mentioned fruit
What is a fruit or vegetable that you don't have too often in school that you wish you had more of?	watermelon; I like vegetables but we get all of the vegetables here	watermelon	watermelon; corn	watermelon ; corn	All said either fruit or vegetable
Who can tell me an adult at school you would talk to, to get more of your favorite fruit or vegetable at lunchtime?	principal	principal	Ms. Debbie	Ms. Debbie	Would ask principal or lunch lady
What would you say to me?	Ms. Debbie, we don't get a lot of	sometimes kids are not taking FV,	watermelon is a healthy snack	could you add more watermelon	They all knew what to

	corn/watermelon here it would be great to add to menu	you should take survey to add the ones they like to the menu	and a lot of kids like it	/grapes because they are good?	say to adult. Most would ask a specific request to adult.
Do you think anyone would listen to your suggestion and make a change? Why or why not?	yes. She wants to get what kids like	I would be in the middle because sometimes they are really busy and sometimes they have a bunch of time	yes, she knows a lot of people like it	yes because she's really nice and a good listener	Most of the students thought adult at school would listen to suggestion because they thought adults wanted to get what kids like, knew kids would like it, was nice Other was hesitant because they thought adult was busy sometimes
Do you feel comfortable asking an adult at school this week to buy your favorite FV?	I would feel kind of comfortable because I'm not a good public speaker	I would be nervous, we have a substitute principal right now; Scared to ask teachers-sometimes teachers are mean and they might yell at me	Yes, I would feel comfortable because I think they would listen	No because I'm shy	Most of the students were not comfortable asking because of shyness, nervousness or feared that adult may yell

Favorite FV at home?	mango, grapes, watermelon, all the berries	watermelon, <i>apples</i> , don't like bananas	<i>tangerines</i>	<i>apples</i> , watermelon, grapes, mango	All mentioned fruit
FV you wish you had more of?	mango	grapes, tangerines, strawberries	strawberries	watermelon	All said fruit
Adult at home you would talk to, to get more FV?	mom	grandfather	aunt	mom	All would ask family member
What would you say to me? Would they listen to your suggestion?	can we buy more fruits like mango/tangerine. My mom always listens to me	Can we go to the store and buy more fruits because we barely have them at home? They will listen if my brother doesn't hear; They will listen if they go by themselves without us as long as they don't forget	My aunt would listen because she likes a lot of fruits and vegetables	Mom, can you go to the grocery store and buy grapes and watermelon? Yes, she would listen because she's a good listener	Students all knew what to ask specifically, "can we buy more FV?" One asked to go to the store. They all thought adult would listen to suggestion because they knew adults would listen.
Do you feel comfortable asking adult to buy FV this week?	I would be comfortable because my mom would want me to eat healthy and would be happy	Yes, he wouldn't yell if I ask for something healthier	Yes, because my aunt always listens to me. Unless it costs too much	Yes, because I would be getting fruits and my mom would be happy	All felt comfortable asking at home because adult wants them to be healthy. Cost was the only barrier
How do you feel if	I would be happy	I would be happy and eat	I would be happy but my	Happy because	All would be happy

you had asked them to buy a FV this week and they bought it for you and fam?	because I love fruit but wouldn't share with my brother because he would eat all of it	watermelon with one spoon	mom would eat all of it	she listened to my suggestion	if adults listened and bought favorite FV. They seemed excited and animated when sharing their feelings.
Prepare fruits and veg?	peel mango and cut up for snack or side dish Sometimes I cook dinner. I cook steak, fried fish, white rice, pancakes	wash fruit, make blueberry pancakes; I help most of the time; I cook breakfast when they wake up late	wash/peel mango; I help most of the time	wash grapes and help with dishes	Identified food preparation ranging from washing and peeling to cooking meals.

Questions	Ethan	Joahluis	Luansil	Shailia	Initial Codes
Favorite food	Macaroni	Noodles	Chicken	Macaroni and cheese	All mentioned a favorite food
Favorite fruit or vegetable served at school	Bananas	Green apples	Peaches	Apples	All said a fruit
What is a fruit or vegetable that you don't have too often in school that you wish you had more of?	Mango, broccoli	Mango, broccoli	Mango, cauliflower (cooked)	Mango, broccoli	All said a fruit or vegetable
Who can tell me an adult at school	Ms. Luca (TA upstairs)	Ms. Medina who walks	Ms. Medina	Ms. Medina	All mentioned a teacher

you would talk to, to get more of your favorite fruit or vegetable at lunchtime?		around the lunchroom		and Ms. Luca	
What would you say to me?	Excuse me, can you please tell the lunch ladies they should have mangoes as snack; (asked why not ask the lunch ladies) they work all day and try their hardest to make what we want	Excuse me, do you mind telling the lunch ladies to put broccoli in the salad bar	excuse me, can you tell them to put mango as one of the fruit; (asked why you would ask Ms. Medina to ask the lunch ladies and not yourself) wouldn't ask lunch ladies because they are too nice and I don't want to offend them	Can you put mangoes in the salad bar or snack?	They all knew what to say but would tell teachers to tell lunch ladies to put FV in specific meal. They wouldn't want to ask lunch ladies directly because it may make them offended
Do you think anyone would listen to your suggestion and make a change? Why or why not?	Yes, because Ms. Luca is a good teacher possibly. Lunch ladies might not agree they might think they already have what the kids want	Yes, Ms. Medina is responsible and listens and takes our advice	Yes. (not the lunch ladies) because they all speak Spanish	Ms. Luca would listen, can ask her privately if can't hear in cafeteria	They all thought teachers would listen and take their advice. Would not ask lunch ladies.
Do you feel comfortable asking an adult at school this week to buy your favorite FV?	(cafeteria ladies) they may actually do it if they listen to us (Ms. Luca) yes they're nice and listen to what we have to say	(cafeteria ladies) up to their decision; (ms. Medina) yes, they're nice and listen to what we have to say	Not comfortable asking lunch ladies because don't want to interfere they are already working hard. They make what Sodexo tells	(Cafeteria ladies) are really nice and listen to us (ms. Luca) yes they're nice and they listen to what we have to say	They all felt comfortable asking teachers because they're nice and they listen. Some wouldn't feel

			them to; (ms. Medina) yes they're nice and listen to what we have to say		comfortable asking lunch ladies because they wouldn't want to bother them.
Favorite FV at home?	oranges/mango	apples/oranges	what they all just said because my parents say it's good for me	grapes/apples	All say a fruit
FV you wish you had more of?	Green grapes	Mango	Sweet potato or yam "orange potato"	Mangoes (they don't grow in winter just summer) and grapes	All say a fruit or vegetable
Adult at home you would talk to, to get more FV?	mom	mom, she shops	dad, grandpa	mom, dad, grandparents	They would all ask relatives
What would you say to me? Would they listen to your suggestion?	If you have time when you're not busy, can you take me to the market to get grapes; she would still listen if she went without me	mom when you have the opportunity, can you go to market to get mango; 70% of time she is likely; other 30% she's busy with work	Daddy, when you can, can we go to market to buy FV? 55% he would say yes, other 45% wouldn't because bones hurt and has high BP; usually go to store with dad to take care of him; he would listen even if I didn't go	mom, please when you have the chance can you go get more grapes, mangoes, other fruits; 90% of time she would, other times she's on phone, working, picking up siblings	Students would ask adult at home to take them to the market or have adult go to the market; they thought they would listen to their suggestion, but also considered that adult may be busy

Do you feel comfortable asking adult to buy FV this week?	When I want something, my parents will get it for me	My parents care about my health	yes, my mom/dad say whatever I need they are here for me	yes, mom goes every 2 weeks to get FV, she will go once a week to get what we need; brother has allergies and needs specific food	All would feel comfortable asking relatives because they usually get what they want and care about their health
How do you feel if you had asked them to buy a FV this week and they bought it for you and fam?					Didn't ask this questions
Prepare fruits and veg?	My older sister cuts mango	cut my oranges in 4 pieces (dad does) I like to make banana milkshake supervised 3x/week	I help my mom and dad because we include FV in all meals; I cook, slice, peel them, sometimes mash	With apples, oranges, mangoes, mom and dad slice them because we can't use knives, with mushrooms we eat them cooked with rice and sometimes brother eats them alone; will ask mom or dad to juice, dad always in the kitchen (doesn't help)	Some students do not help prepare food, but some help (in general to specific food item)-cook, slice, peel, mash.

Questions	Karishley	Gleny	Quadir	Komong	Initial Codes
Favorite food	pizza	pizza	ramen noodles	ramen noodles	All said a favorite food
Favorite fruit or vegetable served at school	apple	orange	broccoli	pear	All said a fruit or vegetable
What is a fruit or vegetable that you don't have too often in school that you wish you had more of?					
Who can tell me an adult at school you would talk to, to get more of your favorite fruit or vegetable at lunchtime?	one of the teachers helps at lunch; ms. Luca also helps at lunch	ms. Maria	nobody.... Mr. Yole (gym teacher)	the lunch teacher- don't know her name	Would ask teachers or lunch monitor
What would you say to me?	may you please put more apples in the menu	Hi Ms. Maria, can you please put more orange in the food thing... menu. Because I like them and want to eat them more	Mr. Yole, can you.... (how do you feel?) shy; (why do you feel shy?) because I don't feel confident enough; (if he did ask) yes	may you put pears on menu more often?	Most would know what to say and say it politely, and were specific about food but just ask to put on menu.

Do you think anyone would listen to your suggestion and make a change? Why or why not?	I think she would because she is a really nice person	I think she would because she is a helper, so she would use suggestion to put fruits on lunch menu; so she would say to them please more oranges	(if confident enough would he listen to your suggestion...) yes, probably do it	Yes, because she's lunch teacher so she would have to put	All thought adult would listen to them because adult was nice and because it's a part of their job.
Do you feel comfortable asking an adult at school this week to buy your favorite FV?	First I would want to know the right way to say it; want to learn the right way to say it	Yes, I know her since 3rd grade, she is really good person and would do it; (how would you feel if she did do it?) happy and would say thank you	No- I just wouldn't want to because I don't feel comfortable enough	No because I already had pears today. I probably would take a break off pears; (comfortable asking for another favorite FV this week) no not really because she might change her mind and put a different fruit	Most were not comfortable because they were not confident or don't have the skill in asking. One was comfortable because student has long relationship with adult
Favorite FV at home?	pineapple- I have it sometimes, not a lot; carrots	um, grapes	mango- 3 times a month	My favorite fruit is lychee	All said a fruit or vegetable
FV you wish you had more of?	strawberries	tomatoes	pineapple	lychee	All said a fruit or vegetable
Adult at home you would talk to, to get more FV?	my parents; my mom (grocery) because my dad gets late at home	my parents (they do the grocery)	my father	my parents and my brother- he is adult age; mom does	All would ask relatives who do the

				groceries and brother goes with them	grocery shopping
What would you say to me? Would they listen to your suggestion?	Mom, can you please buy me pineapple, carrots, and strawberries; she only does it if I ask her in a nice manner	Well I always say mommy, can you please buy me some grapes? She does when I say please	Dad can you please buy me some mango and pineapple; maybe because he has a lot of stuff to do; he does the grocery shopping; with my mom, she be like 'can you please go grocery shopping?' he says he will go tomorrow; he has a lot of stuff to do	I would ask my mom, can you please buy me some lychee; yes, if I ask nicely	All would know what to say and would ask politely Would ask relatives buy them FV
Do you feel comfortable asking adult to buy FV this week?	I would, because we go to the supermarket almost every week. It would be a good time to ask	Yes, because they always listen to me, and say okay they want me to be happy always	No, because they are really busy this week; not a good time because won't listen	Yes, always; because they are always getting my back or whn I need help, and they are part of my family	Most would feel comfortable asking adult at home because they want student happy. One did not feel comfortable asking because adult would be busy.
How do you feel if you had asked them to buy a FV this	happy	excited and happy	I'd feel okay because I had it before I won't get hyped again	I feel good	Most would feel happy if adult

week and they bought it for you and fam?					bought a FV this week. One wouldn't be as impressed because they've had it before.
Prepare fruits and veg?	my mom is doing the preparation so I help set up	first open the water and rinse so all bacteria would go away; sometimes when I get home from school and mom is doing dinner I help her	I just dig in	First, I wash the dishes and put lychee in it and wash and eat them; most of the time	Most do not help with the food preparation, but some wash

Questions	Kenny	Cesar	Julisa	Niobell	Initial code
Favorite food	watermelon, cheese, bacon, salami, sandwiches ... I eat a lot of stuff	broccoli, carrots, green beans	cherries	apples	All said a favorite fruit or vegetable
Favorite fruit or vegetable served at school	watermelon- only on special day they serve	pear, strawberries	grapes	watermelon	All said a fruit
What is a fruit or vegetable that you don't have too often in school that you wish you had more of?	watermelon	mango	kiwi	grapes	All said a fruit

Who can tell me an adult at school you would talk to, to get more of your favorite fruit or vegetable at lunchtime?	Ms. Debbie; she is one of the nicest lunch ladies in school. They all pick Ms. Debbie	Ms. Debbie	Ms. Debbie	Ms. Debbie	All would ask lunch lady
What would you say to me?	I would say I am asking if you could please add watermelon to the area- where they have all fruits... salad bar	I can't think; Yes, I would say thank you... (came back to ask again) I don't know	I would ask; Hi I was wondering if we could get more grapes because they're my favorite	say same as Julisa but with watermelon	Most would know what to say, but overall seemed not confident when saying it
Do you think anyone would listen to your suggestion and make a change? Why or why not?	Ms Debbie- she may- (why maybe) she doesn't have the time has to cook for a lot of people; after 5th grade, lunch is over- always busy	Maybe, like what Kenny said she's busy a lot too	Ms. Debbie- I think she would listen because she cares about kids	I think she wouldn't because she is just one person	Most were not confident that adult would listen to their suggestion because lunch lady was busy. One was confident because lunch lady cared about kids.
Do you feel comfortable asking an adult at school this week to buy your favorite FV?	Kind of- I don't know if she has time; if time- yes; (after Cesar's response) He will probably be afraid alone in the cafeteria	I would say yes (one thumb up, side, down) - thumb side because not sure what she will say	I feel comfortable, because I know her a long time and won't be shy	No, because I don't know her a lot, only a little, I would feel awkward	Comfortable to not comfortable at all
Favorite FV at home?	watermelon with no seeds	peach	bananas	bananas	All said fruit

FV you wish you had more of?	Kiwi	mango	grapes	I don't know, I like everything with fruit	All said fruit
Adult at home you would talk to, to get more FV?	My grandmother because she will get me anything I want (does the grocery shopping)	My momma	My mom	My mom	They would all ask their relatives at home
What would you say to me? Would they listen to your suggestion?	Abuela, can you please get more kiwi. She would listen because she knows me well; she would buy stack of kiwis; (is she the only person who does the grocery shopping?) no my mom, grandma, uncle, second family- all go shopping- mostly the girls)	Can I porfavor have mangoes; yes when I ask	I would ask my mom- when you go shopping again, can I have grapes? She will think about it, buy it every month because the grapes may feel nasty	I would tell my mom what fruit or vegetable I want and she would get it; yes because she loves me	They would all know what to say to relatives and ask them to get it at the store. Most were confident they would listen to their suggestions because knows them well and they love them
Do you feel comfortable asking adult to buy FV this week?	Of course, I'm addicted to watermelon; I'm comfortable because I know her, I'm nephew and son, see her a lot and close	Yes, I'm comfortable because usually I go with my mom and tell her, "can we get mango" and she will go and get it	Because we talk about what we eat- I tell her I love to eat grapes and she will get them	Yes, because we go this week	All were comfortable because adult because they have comfortable relationship and that they have a trip to the grocery store planned.

How do you feel if you had asked them to buy a FV this week and they bought it for you and fam?					
Prepare fruits and veg?	Cut it, grab blender, kiwi, peel strawberry, drop it with ice (do you do that often?) not a lot because I don't have kiwi, (responding to Cesar) need ice with smoothie- to be cold and chunky	I peel mango, cut strawberries, put ice in water	We eat broccoli with cheese: we put water in hot pot, add broccoli, add cheese (me, mom, big sister)	make smoothies (do you do it yourself?) yes- help from mom	All have prepared food in general- cut and peel.
Questions or comments?	There would be hair and nails in our food; the pizza is reject, bad tasting everything except watermelon, need real food. Chicken patty- they just slap a bun with chicken patty(what would you do to make food better?) If	The people who have pizza don't eat it	Found a bandaid in food once; Do you think they will consider our suggestions?		When talking about school lunch in general, students were very excited about discussing how they don't enjoy school lunch for the taste and quality. They would feel

	make pizza- make better; I would feel more confident if I went with friends to tell them				more confident if they went with friends to tell adults their opinion
Comments Reflection					<p>This group identified some specific complaints and wanted to make a change but had barriers unexplained; didn't want to ask and make change; didn't feel comfortable asking adult at school and perceive that adults would not listen.</p> <p>They seemed comfortable asking adults at home because students have an established relationship with</p>

					them, and they know adults would listen to their suggestion
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Questions	Arcina	Donavin	Bao	Rene	Initial Code
Favorite food	pizza	macaroni and cheese	chicken hamburger, sandwich	peanut butter and jelly	All said their favorite food
Favorite fruit or vegetable served at school	strawberries	orange	pear	orange	All said a favorite fruit
What is a fruit or vegetable that you don't have too often in school that you wish you had more of?	cauliflower, apples	cucumbers	cucumbers, bananas, grapes	celery	All wished for a fruit or vegetable
Who can tell me an adult at school you would talk to, to get more of your favorite fruit or vegetable at lunchtime?	Ms. Yergey, my favorite teacher	one of the lunch ladies	lunch ladies because they manage the food	Ms. Macaroy-math teacher; eat lunch at her office	They would ask teacher or lunch lady
What would you say to me?	I would say I would ask her for more fruit and vegetables	I would say can you please put more cucumbers in the snack	Could you please put more bananas on the menu, please	May you please.. I would ask her if she can tell lunch ladies to add to lunch	They all knew what to say to adult and most would ask politely for fruits and vegetables in

				menu, so we can know they add it. I usually ask Ms. Macaroy more- she buys stuff at the store (I ask, why do you ask her more often?) she is the one I share my foods with	general or add to menu
Do you think anyone would listen to your suggestion and make a change? Why or why not?	Yes, because she has a big heart for people she cares about (I said, what would you ask?) If she could talk to lunch ladies to add it (I said, why ask her and not lunch lady?) no reason	Yes, because I would say it in a kind way; lunch ladies like kindness; if they give you a tray they say thank you	Yes, let me think. Because they are kind and helpful with what they put on food menu	Yes, because she cares for us a lot so we don't go out of hunger and get dehydrated	All thought adult at school would listen to their suggestion because adult is caring and kind.
Do you feel comfortable asking an adult at school this week to buy your favorite FV?	Yes, because she's the only teacher that I like and care about. I like her a lot	Yeah, because this week I've been trying to stay low in carbs (I said, why?) because I've been playing basketball; (I said, coach tell you?) Yes	Yes, I think so, I'd just say yes because banana is my second favorite fruit so I would feel comfortable asking to put on menu	Yes, depends if we go with her, because we want to stay healthy	All would feel comfortable asking adult because they have comfortable relationships with (teacher) and think adults want them healthy

Favorite FV at home?	carrots	corn, spinach, cabbage	banana and apples	celery, oranges, carrots with dressing and salads	All said a favorite fruit or vegetable
FV you wish you had more of?	oranges	passion fruit	more strawberries	mangoes	All wished for a fruit
Adult at home you would talk to, to get more FV?	aunt	grandma-more shopping over my mom	mom; all-most of the shopping	dad; (I said, do most of the shopping?) yes	All would ask relatives
What would you say to me? Would they listen to your suggestion?	I would say if you go out to the store again can you get more oranges? Very nice, gets what I ask for; she would listen	Can I go to the store with you so you can get the fruits I want? All depends because she only can buy limited groceries and can't buy extra (I asked, how are ways to get her to listen?) ask her before she does	Could you please buy more strawberries when you go to shop? (will she listen?) Yes, because I'm her favorite. I think so; (why wouldn't she?) If too many items or groceries she wouldn't buy any; have 50 cents maybe not buy a fruit (what would you do to get her to buy more?) maybe save some money to buy some fruits for me	If you have time, can you bring me to market to buy mangoes? Sometimes he has time or doesn't because of work. So now I ask my dad... (Do you think he would get it for you if you didn't go to the store with him?) Yes, If I didn't go to the store he would still listen	All would know what to say and would either ask adult to go to the store with them or have the adult go to the store to get their favorite FV. Most think adult would listen to their suggestion because they're nice and have a good relationship with them. But some barriers would be money and being busy.
Do you feel comfortable asking adult to buy FV this week?	Yes, because I'm her favorite, every time she goes and I ask her for it she gets it	Yes, because she goes to the store and I go with her and ask her for it and	Yes, because sometimes she goes buy only once a week or if we have low resources, because I'm	Yes, because I trust my dad	All would feel comfortable asking adult to buy FV this week because student has good and trusting

		she says yes (If you don't go to the store with her, do you think she will remember to get it for you?) sometimes	the 4th brother and 2 sisters so 8 people and stuff goes quickly. (what resources are you talking about?) things (he listed food items)		relationship with adult, and other times if student is at the store with them adult would say yes.
How do you feel if you had asked them to buy a FV this week and they bought it for you and fam?	Happy	Feel happy	Happy, because I like to eat them	I would be grateful he bought it for me	All feel happy (and said so in a cheerful way)
Prepare fruits and veg?	I would wash them, chop them, and eat; one of my sisters helps me. (how often do you do that?) sometimes, when I need help	Grapes- wash them put in bowl; apple- wash off; cabbage- help grandma with washing and no dirt inside holes	Peel bananas regular way	cutting the celery, oranges, peel the carrots (I asked, do you do it by yourself?) yes, with my brother (I asked, how often?) on Saturdays and Sundays because my mom doesn't let us bring food to school	Some have prepared food (specific days or in general)- would wash, chop, cut- and some have not.
Comments Reflection					Even though they said they were comfortable asking adult at school and home to put FV on menu, this group

					didn't sound confident with their responses in general; I think they seemed very shy and didn't know exactly who they'd talk to.
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Questions	Geara	Jaileth	Elian	Marques	Initial Coding
Favorite food	mashed potatoes	mashed potatoes and gravy	ham and cheese sandwich	meatloaf	All said favorite food
Favorite fruit or vegetable served at school	grapes, lettuce	lettuce, green peppers	apples, grapes	apples, oranges	All said favorite fruit or vegetable
What is a fruit or vegetable that you don't have too often in school that you wish you had more of?	strawberries	green peppers	strawberries	pineapple	All wished for a fruit or vegetable
Who can tell me an adult at school you would talk to, to get more of your favorite fruit or vegetable at lunchtime?	cafeteria lady	gym teacher	mrs. Waterman; cafeteria lady who gives us choice	cafeteria woman	They would ask lunch lady and gym teacher
What would you say to me?	I would say I have a request to add more strawberries to the menu	May I have more peppers	Can you people please... I would be kind, but I don't know... Can you please put more	I'm not sure what t say. We are nervous guy (referring to Elian)... can you please add this	Mixed-some knew what to say and some didn't; they didn't seem to have a grasp on

			grapes and apples on menu?.... Would need to practice before asking	more to the menu?	what to say overall.
Do you think anyone would listen to your suggestion and make a change? Why or why not?	Yes, because they are really friendly	I think they would say yes	Yes, very kind	Not sure, because they may say they cant buy or order it	Most said yes because they were friendly and kind, one was not sure because they may be unable get it
Do you feel comfortable asking an adult at school this week to buy your favorite FV?	Yes, because they are kind and would do anything to make us happy	Yes , because they are really kind- 2 gym teachers (why not ask another adult?) I would but used to ask gym teacher	Yes, I am nervous but I need to say because I don't always like what they have (would you ask this week?) yes; If you talk to them, won't be nervous. We need a little cheer to do it. (who will cheer?) probably Marques	Yes, because I wouldn't be nervous to tell them (do you think it will work?) yeah	All feel comfortable asking adult. But conflicting responses because they need practice and were nervous.
Favorite FV at home?	Low on veggies at home- strawberries, grapes, lettuce, potatoes	my mom makes a soup- peas, carrots, cut potatoes; fruits- strawberries, watermelon, grapes	apples, grapes, pineapple; try to eat salad for vegetable; don't really like	My mom makes me eat a lot of carrots, corn, peas right now because my iron is low; (do you like veggies mom gives	All said favorite fruit or vegetable

				you?) not really... potatoes	
FV you wish you had more of?	potatoes because you can do lots with it (mash, etc), corn	potatoes	strawberries, oranges	oranges	All wished for a fruit or vegetable
Adult at home you would talk to, to get more FV?	my mom because she's the only one I live with; when I'm with dad, he gets chips	mom and dad	uncle in law	mom	All would ask relatives
What would you say to me? Would they listen to your suggestion?	Mom for dinner I want potato and corn; most of the time no, she is very strict about what she has. Cheap.	may I have potatoes please; when fridge is full she says lets finish until fridge is empty	mom can I please have some more apples? Uncle, excuse me are you going to buy corn this week? (would mom say yes?) yes, if she thinks I'm serious	Same as Geara, she knows it won't last a while- (would she buy it) she would be it sometimes; if we have stuff she won't go buy it again until it runs out	Most would know what to say to adults, but they think adults would hesitate in listening to their suggestions because of cost.
Do you feel comfortable asking adult to buy FV this week?					
How do you feel if you had asked them to buy a FV this week and they bought it for you and fam?	jump around like a kangaroo and disorganize my room	happy, jump a lot, say thank you a lot and kiss on cheek	excited, happy	feel pretty good	The students would feel happy (they looked happy in the room, eyes animated with hand

					gestures of excitement)
Prepare fruits and veg?	my mom doesn't; I do breakfast and lunch my mom too lazy; self-cut everything because of YouTube; mom said to learn how to do things my own; snack and dinner-mom does	When mom makes food, I ask her to cut my fruit and peel apples; I ask her to cut it for me; she helps when I cut by myself she watches me; only small thing because dangerous	apple- wash it and eat it, take off sticker; grapes- read bag and if it has seeds and wash; orange- peel (by yourself?) yes-sometimes mom does; helped my grandpa chop wood (indicated he can do things himself)	I don't help my mom prepare; I go grab fruit; mom tricks me with food inside	Most have not prepared FV at home, but one is fairly independent at home and has learned to cook

MATRIX 2: Pre-Intervention

Who can tell me an adult at school you would talk to, to get more of your favorite fruit or vegetable at lunchtime?

- *Almost all would know who to ask. Either lunch lady, lunch monitor, principal, or teacher*

What would you say to me?

- *Almost all would know what to say to adult*
- *Ask for their favorite fruit or vegetables on specific days, meals, and would ask politely*
- *Some did not seem confident in asking for FV (some admit they're shy, not confident) or would not ask at all.*
- *The topic of asking lunch ladies were mixed in one group because asking for their FV may offend them.*

Do you think anyone would listen to your suggestion and make a change? Why or why not?

- *Ranged from they "don't think adults would listen to their suggestion" to they "think that adults would listen to their suggestion"*
- *Reasons they would listen: they care about students' happiness, they will ask nicely, adults are nice, it's part of their job, and they want to make them comfortable, and respected*
- *Reasons they won't listen to suggestion: may have stuff planned, busy, may offend them, may not be able to get it*

Do you feel comfortable asking an adult at school this week to buy your favorite FV?

- *Most ranged from "not comfortable" to "comfortable" within and across groups*
- *Reasons for confident: want themselves or others healthy, comfortable with adults, adults respect their opinions, adults nice, they'd listen, has relationship with adults, think adults want them healthy*
- *Reasons they're not comfortable: don't have the skill in asking, shy, nervous, doesn't want to bother them, adults may change their mind, not sure what they'll say*

Adult at home you would talk to, to get more FV?

- *Almost all would ask their family members to get them more FV*
- *They would ask family member or any adult at home*

What would you say to me?

- *Almost all would know what to say to adult*
- *Would ask to go to the store with them or just ask adult to get it for them*

- *A majority would consider asking politely*

Would they listen to your suggestion?

- *Most think adults will listen to their suggestion to buy their favorite FV*
- *Reasons they think adults will listen: they're good kids, want them healthy, if they ask politely, care for them, they're nice*
- *Reasons they think adults won't listen: too busy, the weather, siblings will ask too, health reasons, taste, cost*

Do you feel comfortable asking adult to buy FV this week?

- *Almost all would feel comfortable asking their family members to buy FV this week*
- *Reasons they feel comfortable: respect their suggestions, family will enjoy it, use it for other things, adults want them healthy, usually adults get what children want, want children happy, positive relationship*
- *Reasons they don't feel comfortable: money and busy*

How would you feel if you asked them to buy a FV this week and bought it for you and fam?

- *A majority were excited, happy (kids were overall very cheerful and animated when responding to this question)*

Prepared fruits and vegetables

- *Most prepared fruits and vegetables (specific times, in general, specific meals recalled)*
- *Some have not prepared fruits and vegetables*
- *When recalling specific times, some seemed engaged and happy in sharing stories*

FINAL THEMES: Pre-Intervention

1. Self-Efficacy

School: Children were able to express their relationship status with an adult at school whom they would talk to get their favorite FV in the school food environment. This drove children to feeling not comfortable to comfortable about asking adult at school to put their favorite FV on the menu this week.

Relationship with Adult

Feels comfortable

- *“Yes [I feel comfortable asking adult at school to put FV in menu]. I’ve known her since 3rd grade, she is a really good person and would do it.”*
- *“Yes [I think adult at school would listen to my suggestion and make a change] because she has a big heart for people she cares about”*

- “I feel comfortable because I’ve known her for a long time and won’t be shy”
- Doesn’t feel comfortable
- “I would be nervous. We have a substitute principal right now. Scared to ask teachers. Sometimes teachers are mean and may yell at me.”
- “No, [I would not feel comfortable asking an adult at school for my favorite FV] because I don’t know her a lot, only a little, I would feel awkward.”
- (Student put thumb between thumbs up and thumbs down) “Not sure what she will say.”

Home: *Children were able to express their relationship status with an adult at home whom they would talk to get their favorite FV in the school food environment. Because almost all students had positive relationships with the adult at home, this drove children to feeling comfortable in asking adult at home to buy their favorite FV.*

“They think” adults would listen to their suggestion and make a change:

- “I think [adult at home] would listen. She tells me to eat more to get strong and healthy”
- “Yes, she would listen because she’s a good listener”
- “My aunt would listen because she likes a lot of fruits and vegetables”
- “Mom is very likely to [listen to my suggestion] because she wants us strong and healthy”

They don’t think adults would listen to their suggestion and make a change:

- Yes, because my aunt always listens to me. Unless it costs too much.
- “[I would say] mom and dad, may we please get some fruit and vegetables? Most of the time, mom says yes, but sometimes may be too cold to go, sometimes too tired to shop because she works 3rd shift at the hospital”
- “Most of the time no [I don’t think she will listen to my suggestion]. She is very strict about what she has. Cheap.”
- “Mom, please when you have the chance can you go get more grapes, mangoes, other fruits; 90% of time she would, other times she’s on phone, working, picking up siblings”
- “Maybe [he will listen to my suggestion] because he has a lot of work to do… he says he will go tomorrow. He has a lot of stuff to do”

- “All depends because she only can buy limited groceries and can’t buy extra”

Relationship with Adult

- “Yes [I feel comfortable asking adult to buy FV this week because] mom would respect me and want me to ask her for fruits and vegetables.”
- “I would be comfortable [asking mom to buy FV this week] because my mom would want me to eat healthy and would be happy”
- “She would listen because she knows me well. She would buy a stack of kiwis”
- “Yes [I feel comfortable asking adult to buy FV this week] because they always listen to me, and say okay they want me to be happy always”
- Yes, I’m comfortable because usually I go with my mom and tell her, “can we get mango” and she will go and get it

2. Outcome Expectations

School: Students had positive and negative outcome expectations as a result of asking for their favorite FV’s

Positive Outcome Expectations:

- “Yes [I think adult would listen to my suggestion and make a change.] She wants to get what kids like... I would feel kind of comfortable [asking them this week to put my favorite FV on the menu] because I am not a good public speaker”
- “Yes [I think adult would listen to my suggestion and make a change] because she’s really nice and a good listener. But no [I would not feel comfortable asking them this week to put my favorite FV on the menu] because I am shy”
- “Yes [I think she will listen to my suggestion] because she has a big heart for people she cares about.”
- [Adult at school] is very nice, so if we ask nicely he will”

Negative Outcome Expectations:

- “I think she wouldn’t [listen] because she is just one person”
- “She may. She doesn’t have the time to cook for a lot of people.”
- “I’m not sure if they would listen to my suggestions to add more bananas”

- “Lunch ladies might not agree. They might think they already have what kids want

Home: Students had positive and negative outcome expectations as a result of asking for their favorite FV’s

Positive Outcome Expectations:

- “I think [adult at home] would listen. She tells me to eat more to get strong and healthy”
- “Yes, she would listen because she’s a good listener”
- “My aunt would listen because she likes a lot of fruits and vegetables”
- “Mom is very likely to [listen to my suggestion] because she wants us strong and healthy”

Negative Outcome Expectations:

- Yes, because my aunt always listens to me. Unless it costs too much.
- “[I would say] mom and dad, may we please get some fruit and vegetables? Most of the time, mom says yes, but sometimes may be too cold to go, sometimes too tired to shop because she works 3rd shift at the hospital”
- “Most of the time no [I don’t think she will listen to my suggestion]. She is very strict about what she has. Cheap.”
- “Mom, please when you have the chance can you go get more grapes, mangoes, other fruits; 90% of time she would, other times she’s on phone, working, picking up siblings”
- “Maybe [he will listen to my suggestion] because he has a lot of work to do... he says he will go tomorrow. He has a lot of stuff to do”
- “All depends because she only can buy limited groceries and can’t buy extra”

3. Strategies

School: At school, most would ask adult ranging from very specific requests (specific days, meals, area to put FV) to asking generally for FV (asking without further details) to not having skills of asking at all.

Specific

- “Can we have bananas on Monday/Thursday?”
- “Can we have kiwi and celery for snack?”
- “Sometimes kids are not taking fruits and vegetable. You should take a survey to add the ones they like to the menu”

- “Watermelon is a healthy snack and a lot of kids like it”
- “Hi Ms. Maria, can you please put more oranges in the menu because I like them and want to eat them more?”
- “I like mac and cheese. Put more mac and cheese in school because every likes it. They could send a chart to pick for next day.”
- “I think we should have better food in school We could write a note and say this is what we want”

General

- *“I would say I would ask her for more fruits and vegetables”*
- *“May I have more peppers?”*
- *“[Lunch lady], get more pomegranate”*

Did not know what to say

- “First, I need to know the right way to say it. Want to learn the right way to say it”
- “I would feel kind of comfortable because I’m not a good public speaker”
- “I can’t think.. I don’t know”
- “Can you please... I would be kind, but I don’t know... Can you please put more grapes and apples on the menu?... would need to practice before asking”

Home: Children would either ask adult to go to the store to get their favorite FV or ask to go to the store with adult to get FV. All children knew what to ask.

- “Mom can you go to the grocery store and buy grapes and watermelon?”
- “Can we go to the store and buy more fruits and vegetables because we barely have any at home?”
- “If you have time, when you’re not busy, can you take me to the market to get grapes?”
- Yes, I’m comfortable because usually I go with my mom and tell her, “can we get mango” and she will go and get it
- “Can I go to the store with you so you can get the fruits I want?”
- “If you have time can you bring me to the market to buy mangoes?”

4. “I help/I don’t help” at home

Children were able to express their competencies in cooking and preparing food to not cooking and preparing at all at home. Children remembered specific times they helped adult prepare food.

“I help” prepare

- “Last summer at grandpas I helped grandma cut potatoes/carrots, apples, potatoes, strawberries.”
- “I help mom chop up like pumpkin- I help take off skin, chop up and cook”
- “For my birthday- we had aunties beef stew- carrots/potatoes chopped up. I chopped the carrots/potatoes.”

- “I help mom and dad cook. Chop peppers and lettuce, boil water, peel potatoes, put in water and add salt”
- “Sometimes I cook dinner. I cook steak, fried fish, white rice, pancakes”
- “I help most of the time. I cook breakfast when they wake up late”
- “I help mom and dad because we include FV in all meals. I cook, slice, peel them, sometimes mash”
- “We eat broccoli with cheese. We put water in hot pot, add broccoli, add cheese.”
- “Cutting the celery, oranges, peel the carrots with my brother on Saturdays and Sundays because my mom doesn’t let us bring food to school”

I. CODING FOR POST-INTERVENTION FOCUS GROUP DATA

Green = confidence

Yellow = lack of confidence

Pink = Support/respect

Red = lack of support/respect

Blue = assistance

Orange = barriers

Purple = strategies

Brown = Helping/Not Helping

Grey = Evaluation Students Take Charge

White Cells= School Environment Responses

Grey Cells= Home Environment Responses

Preliminary Coding- Primary Researcher Only

Green	Yellow	Pink	Red	Blue
It will probably happen	"I don't know hunnie" I'm slightly sure they would say no	It would work! Yes, the principal will ask Sodexo to serve what we like- she wants us happy and she's nice; They will ask people what they like, like we did with the Spring Roll Salad and Lasagna, have a poll	Most will say "we'll see" let's talk to Sodexo and maybe they will think about it	I'm shy, I don't like asking people stuff but would ask if I really like something
They will say yes. If they don't get it that day, they will next time	Don't think they would	See chart; Ms. Debbie she likes when we make suggestions	Sort of comfortable, I think they might say "no", I get a little scared for people to say no (as a group- everyone would	She would probably get it for you because we havent had it lately

			feel more comfortable doing it together. Fear all goes away)	
It would work! They would put it on but it might take a few days	Don't know if they would, they would say, "we'll see". They already have a lot of fruits and vegetables	See chart; I'm kind of not comfortable, in case she says no, but I think yes because she's nice		She says she'll think about it, there's probably a whole bunch of people who ask her and she can't do all at once
It would work! They would like it and talk about it; Find 2 recipes and pick our favorite to add to the salad bar	Maybe, heading to yes because they are nice people but I have my doubt; feel happy	I would feel more comfortable to ask if other people did too		Not shy to grown ups I already know; (as a group) because we're all together
See chart; they always say yes, they like when we ask for healthy foods	I think they would say "no" because there are 700 people in the school and they would have to say yes to everyone. Persuasion would help. I could write a paper about all the good things about peppers; I'd feel accomplished because I was able to persuade them to do it	As a group- more comfortable because you have your friends to be with you so you don't have to be scared or nervous. If by yourself, would be more scared to ask		Sort of comfortable, I think they might say "no", I get a little scared for people to say no (as a group- everyone would feel more comfortable doing it together. Fear all goes away)
It would work! Yes, the principal will ask Sodexo to serve what we like- she wants us happy and she's nice; They will ask people what	Mom, can you please buy some FV? It works other times no because she is busy	Very comfortable because I've known them for a long time, we have a good relationship with them. It's for the school, a good environment		If you ask them, it would be easy

they like, like we did with the Spring Roll Salad and Lasagna, have a poll		
It would work	I don't care if it's cut up; help my mom sometimes. I rarely ask for fruits and vegetables because she will say no so I ask my dad	Ms. Debbie is a very nice woman and she'll try her best. My mom would persuade me to, she always is encouraging me to be my best and stand up for myself; GROUP- because I can get nervous and they will help me out
Can you add mango, pineapple, and kiwi to the salad bar or to a fruit cup? (yes it will work)	Because sometimes my mom is at work and my dad doesn't feel like going	I do a lot and she usually nice so she usually would
She would probably get it for you because we havent had it lately		My mom says yes to fruits and vegetables
Probably see it the next day		My aunt has fruits in the fridge for us to eat. She will get whatever I ask her for. Apples,

Ms. Debbie is a very nice woman and she'll try her best. My mom would persuade me to, she always is encouraging me to be my best and stand up for myself; GROUP- because I can get nervous and they will help me out	
I get nervous sometimes and say I'd do it but then I don't; GROUP- less scared because if something happens to you, happens to everyone else too	
I would want to do it but when I want to ask I'd start laughing because I'd be nervous; GROUP- because not by myself	
I would beg them but they would get it for me because my grandma likes fruit	

	oranges, bananas, grapes, pineapples, carrots, potatoes	
I'll try to put it on the menu	My mom wants me to eat healthy	See chart; cuz she's my mom I trust her/ my mom doesn't eat junk food she eats healthy foods and drinks water. She buys her groceries at Whole Foods
Would say she can add it more often, but not every day. She would have to ask Sodexo to get more mangoes to add to the schools; Would probably take a week or so because have to pick the mango and get them all to the elementary schools	Ms. Debbie, Once you tell her what you want, she usually gets it	See chart; Mom likes eating healthy
Ms. Medina would try her best- she would ask the people who bring the food to make the food and the lunch ladies; would appreciate it	Comfortable because... because they're family	See chart; She likes me to eat healthy if I ask she'll get it
Yes she would get it; I think the kids would go to the salad bar more; would say thank you	Because that's my dad	I feel comfortable asking my mom because I know her attitude and

She would contact the delivery people (sodexo) to put FV on menu more often; excited to see it more frequently and say thanks
I think she would ask Sodexo if they can bring it and probably the next day it would be there; happy
"can we please get peaches more often because I like eating peaches?" ; maybe because sometimes we don't have a lot of food at home often yes because we don't have fruits at home; (goes shopping with family- most of the time go with her. Sometimes I get FV I want
Maybe, heading to yes because they are nice people but I have my doubt; feel happy
Mom usually gets FV but when she

They're our parents; It's not someone I don't know, I've known her (mom) for 10 years

how she'll respond

doesn't and I ask she will
Mom, can you please buy some FV? It works other times no because she is busy
I would beg them but they would get it for me because my grandma likes fruit
See chart; She likes me to eat healthy if I ask she'll get it
To my brother, "do me a solid"; to my mom, "can you please get a mango" Probe-75% chance they would buy it. May not have enough money for it and may need to get something else with the money
She is going to say yes
"hey mom can I have more FV to get much healthier"; 100%
"Anna, next time you go shopping can you get more bananas to add to my cereal?"; so/so depending on mood. In a

good mood, she'd propbably have Josh (brother) go; (goes shopping with family. I almost always go shopping with brother because he likes my company and she gives me money to buy food
I do a lot and she usually nice so she usually would

Blue	Orange	Purple		Brown	Grey
I'm shy, I don't like asking people stuff but would ask if I really like something	See chart- I'm a little shy	"Could you please add more F/V to the salad bar?"	Mom, can you please buy some FV? It works other times no because she is busy	I make smoothies in a small blender for me and my sister	STC- Fun program- I liked seeing the kids try the recipes and vote
She would probably get it for you because we havent had it lately	I'm shy, I don't like asking people stuff but would ask if I really like something	Could you please add other fruits to the menu?	I would beg them but they would get it for me because my grandma likes fruit	I prep bananas, bread and peanut butter. I like to make smoothies and the SNAP-Ed recipes	STC- Fun to see everyone try it and state their opinion
She says she'll think about it, there's probably a whole bunch of	Don't know if they would, they would say, "we'll see". They already have	Could you please add plums, peaches, unfrozen strawberries , grapes, and	I would use manners; I help my dad choose the less expensive foods;	Today my mom made green juice with bananas, strawberries , ice and	STC- It was fun to vote on a recipe

people who ask her and she can't do all at once	a lot of fruits and vegetables	oreanges for those who like them?	When I shop with them I get what I want and can make more smoothies and salads	spinach. Sometimes I cut carrots for her	
Not shy to grown ups I already know; (as a group) because we're all together	Because I haven't been here for years and years- 1st year here	I'm going to think about it and ask Sodexo	Can you buy more apples? (It would work); When I shop with them, I get what I want	I would use manners; I help my dad choose the less expensive foods; When I shop with them I get what I want and can make more smoothies and salads	STC- I learned colors help your body and help you grow. I taught my mom. Purple helps your brain. I like polling and taste testing
Sort of comfortable, I think they might say "no", I get a little scared for people to say no (as a group- everyone would feel more comfortable doing it together. Fear all goes away)	I'm kind of shy; (as a group) as a group they'll talk as well. If she had a question and you don't have an answer, you're friends can answer. You're with your friends so not shy	Could you please add plums to the menu?	Can you please buy more grapes?	I chop tomatoes and onions for my dad to saute	Orange FV help your eyes. I liked voting between the spring roll salad and veggie lasagna. I liked getting students to try the spring roll salad, it makes me feel happy to get kids to try new foods. I like that they served Braou's recipe on

					the salad bar.
If you ask them, it would be easy	Sometimes I'm shy talking to the teachers	Could you please put FV on the menu more often?	Mom, I like strawberries , when you have a chance, can you go buy some?	Could you please add my favorite veggies in soup? I help teach my mom about foods low in sugar	STC- I learned if I don't like FV I can add something to make it taste better. I don't like broccoli too; my mom cooks it to make it softer and adds cheese, chicken and rice; I wish SNAP-Ed had a summer program- if they did I would go; I made the veggie lasagna at home (SNAP-Ed recipe)
Ms. Debbie is a very nice woman and she'll try her best. My mom would persuade me to, she always is encouraging me to be my best and stand	I get nervous sometimes and say I'd do it but then I don't; GROUP-less scared because if something happens to you, happens to everyone else too	Ask Ms. Debbie to put FV on the menu that we like	Mom can you go buy watermelon because we don't get it often?	Me and my brother cut the stem off of the strawberries and slice veggies for soup, sometimes we slice fruit for cakes	There's a lot of FV to try, anything you don't know if you like, you should try it. I tried Curly Kale slaw at home

up for myself; GROUP- because I can get nervous and they will help me out					
I get nervous sometimes and say I'd do it but then I don't; GROUP- less scared because if something happens to you, happens to everyone else too	Not comfortable asking adults like that; GROUP- don't like doing anything alone and with a group they wouldn't let me back out	Could you please add my favorite veggies in soup? I help teach my mom about foods low in sugar	Can you please buy some FV I can eat more often because I like them. Sometimes I go to the store with my mom and pick them out	I slice them (cucumbers), I peel oranges and take them apart (my and my sister)	Different colored foods help your body. I liked the recipes on the newsletters
I would want to do it but when I want to ask I'd start laughing because I'd be nervous; GROUP- because not by myself	I would want to do it but when I want to ask I'd start laughing because I'd be nervous; GROUP- because not by myself	Please tell the Principal to tell Sodexo to put FV on the salad bar	Dad, can I get some pineapple and fruit? I need it! He would think about it, we don't get that many food stamps because my parents are married	Put carrots in soup to taste better; Make "atun"- tuna onions, tomatoes, and seasonings- we eat on chips or just a spoon. I help cup tomatoes	I liked making the posters and rhymes
I would beg them but they would get it for me because my	Mom, can you please buy some FV? It works other times no	Could we take a survey of the school to see what FV they want to see	I don't care if it's cut up; help my mom sometimes. I rarely ask for fruits	Cup up FV sometimes add dressing to veggies (ranch)	I loved the project because we got to try new things like the veggie

grandma likes fruit	because she is busy	on the menu? Can they put those FV on the menu?	and vegetables because she will say no so I ask my dad		lasagna- I made it at home; I liked the posters
See chart; cuz she's my mom I trust her/ my mom doesn't eat junk food she eats healthy foods and drinks water. She buys her groceries at Whole Foods	Dad, can I get some pineapple and fruit? I need it! He would think about it, we don't get that many food stamps because my parents are married	Hello, students in our class would like to know if you could put this fruit on the menu because we like it	I go shopping with my mom and tell her what I want	I don't care if it's cut up; help my mom sometimes. I rarely ask for fruits and vegetables because she will say no so I ask my dad	I liked getting the votes- fun to talk with everyone in the cafeteria
See chart; Mom likes eating healthy	"If you have any extra money, would you buy us more pineapples, vegetables, healthy snacks for us"; sometimes. Baby brother (4 yo) gets her in a bad mood when shopping	Sometime she makes new foods and asks us if we like it and we ask her to keep it on the menu. "A lot of people like peaches, can you add them?"	Ask my mom to go shopping to get more fruits and vegetables	Sometimes I tell mom to do certain things and if she doesn't get it I show her how to cut the fruits and vegetables	I made veggie lasagna at home- I like trying new things. I didn't think I'd like the spring roll salad or veggie lasagna but I did! I liked the recipes and the newsletters
See chart; She likes me to eat healthy if I ask she'll get it	Brother puts her in a bad mood (step mom) so if she is she tells him to go sit down	I was thinking of bringing new fruits to the cafeteria to see if people like	Ask mom if aunt can come with us shopping so I can go too (takes care of aunt,	I ask mom if she can make baked potatoes, cut down the middle and add cheese	STC- Categories and food tasting

		it- they can vote on them- would you help?	who is pregnant at home)	and bacon and leave the skin on; I put the potatoes in the pot; If she's messy, I help clean up	
I feel comfortable asking my mom because I know her attitude and how she'll respond	Surprised because she usually buys what baby brother wants to make him stop crying or what she wants	Can you add more fruits and vegetables to the menu?	Ask my mom to buy fruit and vegetable I want	I'll cut it and eat it; help mom cook	STC- talking about FV, which category does it go in
	Sometimes comfortable, may yell at you if waiting for money to come in	They might wait until other people ask for the same thing. There are a lot of fruits and vegetables but no one eats them. They usually put bananas and oranges but it depends on the day. They could you the loud speaker to ask if kids want more fruits and vegetables.	To mom or stepdad can you please buy me some watermelon and plums; they'll probably buy it	Help cook and peel them. Help with everything- prepping, cooking, don't like cleaning up	STC- when got to taste the food in cafeteria
		Can you add mango, pineapple,	To my brother, "do me a solid";	Get a bucket with water and wash	

and kiwi to the salad bar or to a fruit cup? (yes it will work)	to my mom, "can you please get a mango" Probe- 75% chance they would buy it. May not have enough money for it and may need to get something else with the money	carrots; mom does most; help clean up
Ask her if we can have watermelon tomorrow or next week (Joey- "or as fast as you can)	To my dad, "get me some oranges" Probe- Maybe buy it, he doesn't go a lot	Like carrots with PB; I wash them, now that brother is in college I do a lot
Friday can we please have mango the next day?	"hey mom can I have more FV to get much healthier"; 100%	Help cook, wash them
Ask if we can have grapes every day	Not often, grandma/grandpa/ dad works so sometimes would get it for me; helps to go with them to the store	Sometimes cut vegetables, sometimes prepare it because mom has to do stuff; sometimes my sister helps me and her and I prepare food ourselves
I have no idea what I	Mom/Grandma, when	Mostly cuts up the

would say; "can you add more apples to the menu"	you go shopping can you get these FV? Grandma knows I want to be a basketball player so I go with them when I can (when not playing basketball)	peppers and be careful; prepares eggs oneself
"May you please add something else to the menu if you could"	"Mom, can you get me some more pears and bananas?" When she goes with her, mom asks if there's any FV she wants	I really don't help with it, grandma tells him not to worry about it, grandma helps cut things so he doesn't cut himself
"If you can, can you get more fruits that I like"; more often, because mom will ask him to go to the store to pick out FV	Mom works a lot so sometimes goes with dad	I cut the cabbage; sometime I help cut (onions) and preare; breakfast I prepare myself
"Ms Debbie can you add more strawberries to the menu"	"If you have any extra money, would you buy us more pineapples, vegetables, healthy snacks for	Everything because my mom gets busy doing something else. I have to do them. Do it when mom and

	us"; sometimes. Baby brother (4 yo) gets her in a bad mood when shopping	dad are cooking
"Excuse me Ms. Debbie, if you could, could you add more Mango to the lunch menu?"	"can we please get peaches more often because I like eating peaches?" ; maybe because sometimes we don't have a lot of food at home often yes because we don't have fruits at home; (goes shopping with family- most of the time go with her. Sometimes I get FV I want	Wash them and take off sticker
"Ms. Debbie, may you put more celery on the salad bar?"	"Ma, next time you go to the store, can you please get pineapples, apples, and pears because I like those things and	Usually cut because I am good at cutting; if home when cooking is happening

	so does my sister and brother" (goes shopping with family- usually, on the weekend. Gets me more FV when with her)	
"Ms. Medina, would you ask one of the lunch ladies to add plums to the lunch room?"	"Anna, next time you go shopping can you get more bananas to add to my cereal?"; so/so depending on mood. In a good mood, she'd propbably have Josh (brother) go; (goes shopping with family. I almost always go shoppping with brother because he likes my company and she gives me money to buy food	Everything- wash, cut, cook, when mom and dad cook; sometimes do it myself; love cooking
"Ms. Debbie would it be ok if you		

added more pineapple and fruit on salad bar?"
"Ms Debbie can you please add more cucumbers to the salad bar?"
"Can you please go shopping to get dinner and get corn and grapes?" says, "come with me to the store and come and get it" (do it sometimes)
"can you please add more mangoes to it because I really, really enjoy eating them"
I think they might ask why. Need to give them opinion or fact of why you want more mangoes; happy and overwhelme d beause my favorite

fruit is on the menu and I'd think to myself "I gotta eat it"
"can you put more mangoes"
"I really like green peppers, so could you add more to the menu"
I think they would say "no" because there are 700 people in the school and they would have to say yes to everyone. Persuasion would help. I could write a paper about all the good things about peppers; I'd feel accomplished because I was able to persuade them to do it
"Hey excuse me, may you please tell Sodexo to add more bananas to the menu?"

"Can you
get more
peaches?"
All the time
(all go
shopping
with family-
always go)

MATRIX 1: Post-Intervention

Questions	Darielly	Leesia	Chris	Nathan	Initial Coding
Favorite food	Oranges	Apples & pizza	Baked potato w/bacon	Baked potato w/bacon	All can name a favorite food
Favorite fruit or vegetable served at school	Oranges, strawberries	Apples, oranges, strawberries	Strawberries	Strawberries	All mentioned favorite fruit
What is a fruit or vegetable that you don't have too often in school that you wish you had more of?	Peaches	More oranges	Grapes, more bananas/apples	Plums	All wished for a fruit
Who can tell me an adult at school you would talk to, to get more of	Ms. Debbie-she runs the cafeteria	Ms. Debbie, Other lunch ladies too	Ms. Debbie	Ms. Debbie (the most important lunch lady)	All would ask lunch lady

your favorite fruit or vegetable at lunchtime?					
What would you say to me?	"Could you please add more F/V to the salad bar?"	Could you please add other fruits to the menu?	Could you please add plums, peaches, unfrozen strawberries, grapes, and oranges for those who like them?	Could you please add plums to the menu?	All would know what to say ranging from general fruits and vegetables to specific ones. All said it politely
What do you think would happen if you asked an adult to put your favorite fruit or vegetable on the menu?	Agrees	It will probably happen	"I'm going to think about it and ask Sodexo"	Most will say "we'll see let's talk to Sodexo and maybe they will think about it"	They think adults would listen to suggestion and think lunch lady would depend on Sodexo for FV availability. All sounded certain they will listen to suggestion
How comfortable do you feel about asking them to put it on the menu? (see chart)	See chart; I would be happy they care what we think	See chart;	See chart; I would feel amazing	See chart	50-100% confident at school

Favorite FV at home?	Grapes, cuties	Watermelon, grapes, oranges	All of them (watermelon)	Apples and oranges (soft oranges)	All mention a favorite fruit
FV you wish you had more of?					
Adult at home you would talk to, to get more FV?	Mom and grandma (she lives downstairs)	Mom and grandma	Mom (sometimes she shops and sometimes I shop by myself)	Mom and grandma	All would ask relatives at home
What would you say to me? Would they listen to your suggestion?	Mom usually gets FV but when she doesn't and I ask she will	They will say yes. If they don't get it that day, they will next time	Mom, can you please buy some FV? It works. Other times no because she is busy	I would beg them but they would get it for me because my grandma likes fruit	Mostly think that adults will get them their favorite FV because they usually get FV or another relative likes FV Wouldn't listen to suggestion because they're busy
Do you feel comfortable asking adult to buy FV this week?	See chart	See chart	See chart	See chart	All are comfortable asking (100%)
How do you feel if you had asked them to buy a FV this week and they	I'll get one everyday	Excited	I'll eat it!	I'll eat one or more in the same day	Very excited about responding. They will be excited and eat it.

bought it for you and fam?					
Prepare fruits and veg?	I make smoothies in a small blender for me and my sister	I prep bananas, bread and peanut butter. I like to make smoothies and the SNAP-Ed recipes	Today my mom made green juice with bananas, strawberries, ice and spinach. Sometimes I cut carrots for her		All that participated prepares FV in which they help prep with relatives and make SNAP-Ed recipes. They liked SNAP-Ed recipes Describe making specific food
Questions or comments?	STC- Fun program- I liked seeing the kids try the recipes and vote	STC- Fun to see everyone try it and state their opinion	STC- It was fun to vote on a recipe		The students liked trying the SNAP-Ed recipes and voting. They enjoyed reflecting on this question.

Questions	Mariana	Blanca	Braulio	Pablo	Initial Coding
Favorite food	Mashed potatoes	Mac n cheese	PB & J	Chicken patty	All mentioned a favorite food
Favorite fruit or vegetable	Carrots	Carrots	Carrots, blueberries,	Apples	All mentioned a favorite

served at school			strawberries		fruit or vegetable
What is a fruit or vegetable that you don't have too often in school that you wish you had more of?	Chickpeas/cucumbers	Bananas, watermelon	Watermelon, grapes, tomatoes	Mangoes	All wished for a fruit or vegetable
Who can tell me an adult at school you would talk to, to get more of your favorite fruit or vegetable at lunchtime?	Ms. Debbie	Ms. Medina-lunch monitor that is bilingual; Ms. Debbie	Ms. Waterman	Ms. Waterman	Would ask lunch lady or teacher
What would you say to me?	Could you please put FV on the menu more often?	Ask Ms. Debbie to put FV on the menu that we like	Please tell the Principal to tell Sodexo to put FV on the salad bar	Could we take a survey of the school to see what FV they want to see on the menu? Can they put those FV on the menu?	All students knew what to say. Would ask lunch lady or principal directly and indirectly (i.e. ask principal to ask Sodexo) Also suggested to teacher for

					students to take a survey to see what FV they want on menu
What do you think would happen if you asked an adult to put your favorite fruit or vegetable on the menu?	It would work! They would put it on but it might take a few days	It would work! They would like it and talk about it; Find 2 recipes and pick our favorite to add to the salad bar	It would work! Yes, the principal will ask Sodexo to serve what we like-she wants us happy and she's nice; They will ask people what they like, like we did with the Spring Roll Salad and Lasagna, have a poll	It would work	All believe that adults at school would listen to their suggestions if they ask They think that adults would do similar activity as STC—have 2 items students can vote on to put on the menu
How comfortable do you feel about asking them to put it on the menu? (see chart)	See chart; would ask but I always forget	See chart-I'm a little shy	See chart	See chart	70-100% comfortable asking adult at school As a group 90%
Favorite FV at home?	Kiwi, broccoli, carrots, blueberries	Strawberries, raspberries	Apples, kiwi	Oranges, blueberries	All mentioned a favorite fruit or vegetable

FV you wish you had more of?	Bananas	carrots, kiwi, strawberries, celery, I like veggies in soup (broccoli, onions, tomatoes)	carrots, kiwi, tomatoes, onions	salad	All wished for a fruit or vegetable
Adult at home you would talk to, to get more FV?	Dad (he handles the money)	Mom	Dad	Mom	All would ask relative at home for FV
What would you say to me? Would they listen to your suggestion?	I would use manners; I help my dad choose the less expensive foods; When I shop with them I get what I want and can make more smoothies and salads	Could you please add my favorite veggies in soup? I help teach my mom about foods low in sugar	Can you buy more apples? (It would work); When I shop with them, I get what I want	Can you please buy more grapes? (ALL HELP THEM GROCERY SHOP)	All would know what to say, when they help them grocery shop, they get what they want They also teach them about spending less, about foods low in sugar.
Do you feel comfortable asking adult to buy FV this week?	See chart;	See chart; they always say yes, they like when we ask for healthy foods			Students are 100% comfortable about asking relatives at home for their favorite FV

How do you feel if you had asked them to buy a FV this week and they bought it for you and fam?	Happy and excited; I would make more healthy smoothies	Happy and excited; I would make a fruit salad	Happy and excited	Happy and excited	All would be happy and excited, some would prepare a dish that includes a FV
Prepare fruits and veg?	I chop tomatoes and onions for my dad to sauté	Me and my brother cut the stem off of the strawberries and slice veggies for soup, sometimes we slice fruit for cakes	I slice them (cucumbers), I peel oranges and take them apart (me and my sister)	I like pineapple to snack on	Most have prepared food in the past. Would describe making specific food Chop, cut, slice, peel
Questions or comments ?	STC- I learned colors help your body and help you grow. I taught my mom. Purple helps your brain. I like polling and taste testing	Orange FV help your eyes. I liked voting between the spring roll salad and veggie lasagna. I liked getting students to try the spring roll salad, it makes me feel happy to get kids to try new			Students liked learning about how the colors of fruit help your body. Also liked trying new foods, voting, and seeing a student's recipe on the salad bar

		foods. I like that they served Braou's recipe on the salad bar.			
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Questions	Davonte	Angel	Franchelle	Lydia (left early)	
Favorite food	Salad	Pizza on Friday	sandwiches		All mentioned a favorite food
Favorite fruit or vegetable served at school	Bananas	Apples, mostly have all the time	Oranges		All mentioned a favorite vegetable
What is a fruit or vegetable that you don't have too often in school that you wish you had more of?	Watermelon, grapes	watermelon	peaches and plums		All wished for a fruit
Who can tell me an adult at school you would talk to, to get more of your favorite fruit or vegetable at lunchtime?	Ms. Joanna, she put the Spring Roll Salad on the menu or Ms. Debbie, the other lunch ladies or the Principal	Ms. Debbie	Ms. Debbie		Would ask lunch lady, SNAP-Ed instructor, or principal
What would you say to me?	Hello, students in our class	This question is too hard	Sometimes she makes new foods and asks		Most would know what to say, and

	would like to know if you could put this fruit on the menu because we like it		us if we like it and we ask her to keep it on the menu. "A lot of people like peaches, can you add them?"		would either include the entire class or multiple people liking specific fruit.
What do you think would happen if you asked an adult to put your favorite fruit or vegetable on the menu?					
How comfortable do you feel about asking them to put it on the menu? (see chart)	See chart; Ms. Debbie she likes when we make suggestions	See chart; I'm kind of not comfortable, in case she says no, but I think yes because she's nice	I'm shy, I don't like asking people stuff but would ask if I really like something		80-100% students ranged from not comfortable to very comfortable As a group 100%
Favorite FV at home?	Avocados (plain), mandarin oranges in a fruit cup	Guacamole with chips, watermelon, mangoes, carrots, jello with fruit	Carrots		All mentioned favorite fruit and vegetable
FV you wish you had more of?	Strawberries, mom doesn't get them a lot	Watermelon, only have at parties	Mangoes, pineapples		All wished for more fruit
Adult at home you would talk to, to get more FV?	Mom or step dad	Mom or grandma	Mom		All would ask relatives at home

What would you say to me? Would they listen to your suggestion?	Mom, I like strawberries, when you have a chance, can you go buy some?	Mom can you go buy watermelon because we don't get it often?	Can you please buy some FV I can eat more often because I like them? Sometimes I go to the store with my mom and pick them out		All would know what to say, and would ask relative to go to store to get them their favorite FV. One would go to store and help them out.
Do you feel comfortable asking adult to buy FV this week?	See chart; cuz she's my mom I trust her/ my mom doesn't eat junk food she eats healthy foods and drinks water. She buys her groceries at Whole Foods	See chart; Mom likes eating healthy	See chart; She likes me to eat healthy if I ask she'll get it		Students were 100% comfortable with asking adult at home because they trust them, they eat healthy
How do you feel if you had asked them to buy a FV this week and they bought it for you and fam?	Happy, thankful	Very happy, good	Happy, thankful		Students would feel happy and thankful if parents bought them the FV they asked for; students looked happy when responding to this question

Prepare fruits and veg?	Mostly eat raw, cut carrots, eat carrots with PB	Put carrots in soup to taste better; Make "atun"- tuna onions, tomatoes, and seasonings- we eat on chips or just a spoon. I help cut tomatoes	Cut up FV sometimes add dressing to veggies (ranch)		All students have prepared food in the past. Would cut FV and add vegetables to food to taste better
Questions or comments?	STC- I learned if I don't like a fruit or vegetable I can add something to make it taste better. I don't like broccoli but my mom cooks it to make it softer and adds cheese, chicken and rice; I wish SNAP-Ed had a summer program- if they did I would go; I made the veggie lasagna at home (SNAP-Ed recipe)	There's a lot of FV to try, anything you don't know if you like, you should try it. I tried Curly Kale slaw at home	Different colored foods help your body. I liked the recipes on the newsletters		All the students enjoyed the recipes from SNAP-Ed, and learned about tasting new food or a new preparation of a FV

Questions	Desiree	Chaylene	Mia	Amelia	Initial Coding
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Favorite food	Nachos	Nachos	Nachos and ravioli	Baked potatoes with cheese and bacon	All mentioned favorite food
Favorite fruit or vegetable served at school	Oranges and lettuce	Oranges	Banana, oranges and strawberries	Oranges and strawberries	All mentioned favorite fruit or vegetable
What is a fruit or vegetable that you don't have too often in school that you wish you had more of?	Mangoes		Kiwi	Pineapple	All wished for fruit
Who can tell me an adult at school you would talk to, to get more of your favorite fruit or vegetable at lunchtime?	Ms Debbie and principal	Ms. Debbie and principal	Principal	Ms. Debbie (lunch lady)	Would ask lunch lady or principal
What would you say to me?	I was thinking of bringing new fruits to the cafeteria to see if people like it- they can vote on them- would you help?		Can you add more fruits and vegetables to the menu?	Can you add mango, pineapple, and kiwi to the salad bar or to a fruit cup? (yes it will work)	Most know what to say. They would have students vote or ask to add FV to menu
What do you think would happen if you asked an adult to	"I don't know hunnie" I'm slightly sure they	Don't think they would	They might wait until other people ask for the same thing. There are a	Don't know if they would, they would say, "we'll see". They	Most of these students think that adults would not listen to their suggestions and

put your favorite fruit or vegetable on the menu?	would say no		lot of fruits and vegetables but no one eats them. They usually put bananas and oranges but it depends on the day. They could put you on the loud speaker to ask if kids want more fruits and vegetables.	already have a lot of fruits and vegetables	are discouraged because the cafeteria already has a lot of FV
How comfortable do you feel about asking them to put it on the menu? (see chart)	See chart	I would feel more comfortable to ask if other people did too			25-80% one said under 50% As a group 80%
Favorite FV at home?	Oranges, grapes, fruit platters	Broccoli for dinner	Mangoes/we get the fruit tray when we go to trips	My aunt has fruits in the fridge for us to eat. She will get whatever I ask her for. Apples, oranges, bananas, grapes, pineapples, carrots, potatoes	All mention a favorite fruit or vegetable
FV you wish you had more of?	Mangoes	Mangoes and pineapples	Mangoes, strawberries and pineapples	Strawberries and watermelon	All wished for more FV
Adult at home you would talk to, to get more FV?	Dad shops and mom cooks	I go shopping with my mom and tell her what I want	Mom, dad, aunt (my mom asks me to help her make a	Mom shops and dad cooks	All would ask relatives at home to get their favorite FV

			grocery list every week)		
What would you say to me? Would they listen to your suggestion?	Dad, can I get some pineapple and fruit? I need it! He would think about it, we don't get that many food stamps because my parents are married	Ask my mom to go shopping to get more fruits and vegetables	Ask mom if aunt can come with us shopping so I can go too (takes care of aunt, who is pregnant at home)	Ask my mom to buy fruit and vegetable I want	All would know what to say to relative for their favorite FV. Would ask to go to store with adult or have adult just get the FV for the them. Barriers they mentioned were cost
Do you feel comfortable asking adult to buy FV this week?	I would be comfortable	My mom says yes to fruits and vegetables	I feel comfortable asking my mom because I know her attitude and how she'll respond	My mom wants me to eat healthy	100% would feel comfortable asking adult this week to buy their favorite FV because they know adults' reaction, they promote FV, and adults eat healthy
How do you feel if you had asked them to buy a FV this week and they bought it for you and fam?					
Prepare fruits and veg?	I don't care if it's cut up; help my mom sometimes. I rarely ask for fruits and vegetables because she will say no so I ask my dad	Sometimes I tell mom to do certain things and if she doesn't get it I show her how to cut the fruits and vegetables	I leave a list of what I want her to do	I ask mom if she can make baked potatoes, cut down the middle and add cheese and bacon and leave the skin on; I put the potatoes in the pot; If	Less excitement about preparing FV, sometimes help, but mostly tells adults to prepare for them. If adult is unable to prepare food or needs help, then student will help them.

				she's messy, I help clean up	
Questions or comments?	I liked making the posters and rhymes	I loved the project because we got to try new things like the veggie lasagna- I made it at home; I liked the posters	I liked getting the votes- fun to talk with everyone in the cafeteria	I made veggie lasagna at home- I like trying new things. I didn't think I'd like the spring roll salad or veggie lasagna but I did! I liked the recipes and the newsletters	Students enjoyed making posters and rhymes, try new food, voting, and interacting with students in the cafeteria. One made the Veggie Lasagna at home.

Questions	David	Joey	Faith	(Absent)	Initial Code
Favorite food	Nachos	Spaghetti	Nachos		All mentioned a favorite food
Favorite fruit or vegetable served at school	Carrots, apples	Carrots, mango, oranges	Peaches, celery		All mentioned a favorite fruit or vegetable
What is a fruit or vegetable that you don't have too often in school that you wish you had more of?	Watermelon	Mangoes, watermelon	Grapes, watermelon		All wished for a fruit
Who can tell me an adult at school you would talk to, to get more of your favorite fruit or	Ms. Debbie, Once you tell her what you want, she usually gets it	Ms. Debbie- Only person you can talk to about the lunches	Ms. Debbie- She speaks English and is nicer		All would say lunch lady Lunch lady would get what they want, is approachable

vegetable at lunchtime?					
What would you say to me?	Ask her if we can have watermelon tomorrow or next week (Joey- "or as fast as you can)	Friday can we please have mango the next day?	Ask if we can have grapes every day		All would know what to say and would ask for them on specific days
What do you think would happen if you asked an adult to put your favorite fruit or vegetable on the menu?	She would probably get it for you because we haven't had it lately	She says she'll think about it, there's probably a whole bunch of people who ask her and she can't do all at once (I asked 'If it was just you asking, do you think it would probably happen?') ya	She is going to say yes		They overall would think that adult would say yes, but one was hesitant because there may be a lot of people who ask lunch lady, and lunch lady cannot please everyone.
How comfortable do you feel about asking them to put it on the menu? (see chart)				As a group- more comfortable because you have your friends to be with you so you don't have to be scared or nervous. If by yourself, would be more scared to ask	48-55% by themselves and 100% as a group Better with friends- less scared or nervous

Favorite FV at home?	Apples, plum, watermelon	Mango	Orange		All mentioned a fruit
FV you wish you had more of?	Watermelon, oranges, plum, cherries	Mango, cherries	Kiwi		All wished for fruit
Adult at home you would talk to, to get more FV?	Mom	Mom, brother (older- 13 years old)- both do the shopping	Dad, he sometimes does the shopping; Mom does most of the shopping		All would ask relatives
What would you say to me? Would they listen to your suggestion?	To mom or stepdad "can you please buy me some watermelon and plums; They'll probably buy it	To my brother, "do me a solid"; to my mom, "can you please get a mango" Probe- 75% chance they would buy it. May not have enough money for it and may need to get something else with the money	To my dad, "get me some oranges" Probe- Maybe buy it, he doesn't go a lot		All know what to say From probably to they will listen to my suggestion. Money is a barrier and may need to get something else with money and whether or not adult decides to go to the store.
Do you feel comfortable asking adult to buy FV this week?	A part of your family so can tell them	Comfortable because... because they're family	Because that's my dad		100% comfortable because they're family
How do you feel if you had asked them to buy a FV this week and they bought it for you and fam?	Glad		Happy		Happy and glad, and excited saying it

Prepare fruits and veg?	I'll cut it and eat it; help mom cook	Don't need to but would if asked. I love cooking	Help cook and peel them. Help with everything-prepping, cooking, don't like cleaning up		All have prepared food in the past. Cut, cook, peel
Questions or comments?	STC- Categories and food tasting	STC- talking about FV, which category does it go in	STC- when got to taste the food in cafeteria		STC- Enjoyed categorizing food, food tasting

Questions	Yadiel	Jamari	Sasha	Shane	Initial Code
Favorite food	PB & J, chicken nuggets, ham and cheese sandwich	PB & J, egg roll salad	Pizza, chicken nuggets	Pizza, breakfast- egg and cheese sandwich, sausage, hash browns	All mentioned favorite fruit
Favorite fruit or vegetable served at school	Carrot, apple, mango	Oranges	Strawberries, bananas, carrots and tomatoes, broccoli	Strawberries, bananas, carrots	All mentioned favorite fruit and vegetable
What is a fruit or vegetable that you don't have too often in school that you wish you had more of?	Watermelon, potatoes	Pineapple	Kiwi	Mangoes, strawberries, pineapple, peas, string beans, corn	All wished for a favorite fruit or vegetable
Who can tell me an adult at school you would talk to, to get more of your favorite fruit or	Ms. Luca because I've known her a few years and used to her	Would ask Ms. Luca	"Miss Obama"- the lady next to cashier, Ms. Luca- teacher who do lunch duty; Ms. Medina/Ms. Debbie- to add FV to menu- would ask her because she's the	Ms. Debbie, she's on top of (boss of) the lunch ladies	Lunch lady or teacher

vegetable at lunchtime?			boss of the lunch ladie- Ms. Debbie is kind of nicer		
What would you say to me?	I have no idea what I would say; "can you add more apples to the menu"	"May you please add something else to the menu if you could"	"Ms Debbie can you add more strawberries to the menu"	"Excuse me Ms. Debbie, if you could, could you add more Mango to the lunch menu?"	Most know what to say to adult. Some seemed confident in asking and some were not
What do you think would happen if you asked an adult to put your favorite fruit or vegetable on the menu?	Probably see it the next day	"I'll try to put it on the menu"	Maybe she'd try to do it- she would have to ask the principal	Would say she can add it more often, but not every day. She would have to ask Sodexo to get more mangoes to add to the schools; Would probably take a week or so because have to pick the mango and get them all to the elementary schools	All think that adult will try and put favorite FV on menu, ask principal or Sodexo for the FV One has an idea on how school lunch works
How comfortable do you feel about asking them to put it on the menu? (see chart)		Because I haven't been here for years and years- 1st year here	Not shy to grown ups I already know; (as a group) because we're all together	I'm kind of shy; (as a group) as a group they'll talk as well. If she had a question and you don't have an answer, your friends can answer. You're with your friends so not shy	48-85% comfortable More comfortable if they know adult. Less comfortable if they don't know adult One said below 50% As a group, they would be 100%

					more comfortable asking adult because if you don't know the answer, friends can answer
Favorite FV at home?	Carrots (regular size)	Pumpkin	Corn, carrots, green beans, salad, strawberries, bananas	Pea, corn, string beans, collard greens pineapple, strawberry, blueberry, apple, mangoes, kiwi, watermelon	All mention a favorite fruit and vegetable
FV you wish you had more of?	Peach, apple	Pineapple, string beans	Pineapple, string beans	Watermelon	All wished for fruit or vegetable
Adult at home you would talk to, to get more FV?	Mom- mom is only one that cooks	Mom	I have 3 chefs in my house- dad, grandma, grandpa; I am junior chef; mom doesn't live with me	Mom/grandma do the shopping	All would ask relatives at home for their favorite FV
What would you say to me? Would they listen to your suggestion?	"hey mom can I have more FV to get much healthier"; 100%	"If you can, can you get more fruits that I like"; more often, because mom will ask to go to the store to pick out FV	Not often, grandma/grandpa/ dad works so sometimes would get it for me; helps to go with them to the store	Mom/Grandma, when you go shopping can you get these FV? Grandma knows I want to be a basketball player so I go with them when I can (when not playing basketball)	All would know what to say They think that adults at home would listen to them, some report that it's helpful when they go to the store with them

Do you feel comfortable asking adult to buy FV this week?		Because sometimes my mom is at work and my dad doesn't feel like going			90-100% -- 90% because adult may be busy
How do you feel if you had asked them to buy a FV this week and they bought it for you and fam?					
Prepare fruits and veg?	Get a bucket with water and wash carrots; mom does most; help clean up	Like carrots with PB; I wash them, now that brother is in college I do a lot	Help cook, wash them	Wash them; help put salt (on pumpkin seeds) always help grandma, mom works a lot	Most help prepare for FV Wash, cook, season it
Questions or comments?					

Questions	Peyton	Ivan	Colione	Leyaker	Initial Code
Favorite food	Ravioli	Chicken sandwich	Pizza	Hamburger	All mentioned favorite food
Favorite fruit or vegetable served at school	Carrots	Cucumber	Apples	Orange and peppers	All mentioned favorite fruit or vegetable
What is a fruit or vegetable that you don't have too often in	Celery, mangoes	Plums	cucumber, don't give it our that frequently, pineapples	Cucumbers	All wished for fruit or vegetable

school that you wish you had more of?					
Who can tell me an adult at school you would talk to, to get more of your favorite fruit or vegetable at lunchtime?		Ms. Medina (monitors lunch room)	Knows Ms. Debbie out of all the lunch ladies	Ms. Debbie because she works there	Lunch lady or teacher
What would you say to me?	"Ms. Debbie, may you put more celery on the salad bar?"	"Ms. Medina, would you ask one of the lunch ladies to add plums to the lunch room?"	"Ms. Debbie would it be ok if you added more pineapple and fruit on salad bar?"	"Ms Debbie can you please add more cucumbers to the salad bar?"	All knows what to say and would ask them to put FV in specific location
What do you think would happen if you asked an adult to put your favorite fruit or vegetable on the menu? <i>Probe: How would you feel after they put your favorite or vegetable on the lunch menu?</i>	Ms. Medina would try her best- she would ask the people who bring the food to make the food and the lunch ladies; would appreciate it	Yes she would get it; I think the kids would go to the salad bar more; would say thank you	She would contact the delivery people (sodexo) to put FV on menu more often; excited to see it more frequently and say thanks	I think she would ask Sodexo if they can bring it and probably the next day it would be there; happy	Adult would listen or try her best The adults would ask Sodexo for the requested FV

How comfortable do you feel about asking them to put it on the menu? (see chart)	Sometimes I'm shy talking to the teachers	Very comfortable because I've known them for a long time, we have a good relationship with them. It's for the school, a good environment	Sort of comfortable, I think they might say "no", I get a little scared for people to say no. As a group- everyone would feel more comfortable doing it together. Fear all goes away.	If you ask them, it would be easy	70-100% comfortable because students are sometimes shy, a little scared that adults may say no, but some find it easy As a group 100% because the fear of asking themselves goes away
Favorite FV at home?	Watermelon, bananas, oranges, sometimes apples	Kiwi, apples, plums	Apples, grapes, sometimes oranges, leftover salad	Watermelon, corn, apples, oranges, eggplant- have a garden in the back of our house	All mentioned favorite fruit and vegetable
FV you wish you had more of?	Pears	More pineapple	More watermelon	Grapes	All wished for fruit
Adult at home you would talk to, to get more FV?	Mom- mom mostly shops (ALL go sometimes to store with family)	My step mom (ALL go sometimes to store with family)	Dad (ALL go sometimes to store with family)	Mom/dad, brother (20 years old) (ALL go sometimes to store with family)	All would ask relative at home and go sometimes to the store with family member
What would you say to me? Would they listen to your suggestion?	"Mom, can you get me some more pears and bananas?" When I go with her, mom asks if there's any FV I want	"If you have any extra money, would you buy us more pineapples, vegetables, healthy snacks for us"; sometimes. Baby brother (4 yo) gets her in a bad	"Hey dad, can you try to get some more watermelon if you have leftover money?" sometimes, depend on if they've spend the money for the month	"Can you please go shopping to get dinner and get corn and grapes?" says, "come with me to the store and come and get it" (do it sometimes)	All know what to ask Sometimes says yes, it helps to ask, but sometimes no if the adult does not have enough money.

		mood when shopping			
Do you feel comfortable asking adult to buy FV this week?	Mom works a lot so sometimes goes with dad	Brother puts her in a bad mood (step mom) so if she is she tells him to go sit down		Sometimes comfortable, may yell at you if waiting for money to come in	75-100% Money is a barrier, adult may be busy
How do you feel if you had asked them to buy a FV this week and they bought it for you and fam?	A little surprised. Normally mom gets meat, broccoli, peas and chicken. She really doesn't buy a lot of fruits unless I tell her	Surprised because she usually buys what baby brother wants to make him stop crying or what she wants	Happy because dad would buy stuff for house, if he bought for him (colione), it would be his food	Surprised because they usually forget	3/4 would be surprised because adult doesn't usually buy what the child likes or they forgot One was happy because they listened
Prepare fruits and veg?	Sometimes cut vegetables, sometimes prepare it because mom has to do stuff; sometimes my sister helps me and her and I prepare food ourselves	Mostly cuts up the peppers and be careful; prepares eggs oneself	I really don't help with it, grandma tells me not to worry about it, grandma helps cut things so I don't cut myself	I cut the cabbage; sometime I help cut (onions) and prepare; breakfast I prepare myself	Most cut vegetables and prepare food themselves. One does not help because grandma tells him not to worry about it
Questions or comments?					

Questions	Jaslyn	Andrew	Juan	Ant'taniya	Initial Code
Favorite food	Grilled cheese	Ham and cheese sandwich	Sunbutter and Jelly	Don't eat at school	All mentioned a favorite food
Favorite fruit or vegetable served at school	Frozen peaches	Strawberries	Green peppers	Oranges	All mention a favorite fruit or vegetable
What is a fruit or vegetable that you don't have too often in school that you wish you had more of?	Mango	Mango and bananas	Blueberries	Mango	All wished for a fruit
Who can tell me an adult at school you would talk to, to get more of your favorite fruit or vegetable at lunchtime?	Ms. Debbie because she's a lunch lady	I would too (Ms. Debbie)- she's there, she's the lunch lady. If you tell the teachers, they would probably say "ask ms. Debbie"; I would ask the principal and they would talk to the lunch ladies	I wouldn't ask anyone, I'm more quiet	Ms. Debbie	Most know who to ask. Lunch lady or no one
What would you say to me?	"can you please add more mangoes to it because I really, really	"can you put more mangoes?"	"I really like green peppers, so could you add more to the menus"	"Hey excuse me, may you please tell Sodexo to add more	All would know what to say and would say how much they enjoy the FV, tell

	enjoy eating them"			bananas to the menu?"	Sodexo to add their favorite FV to menu, or just ask generally ("can you put more mangoes").
<p>What do you think would happen if you asked an adult to put your favorite fruit or vegetable on the menu?</p> <p><i>Probe:</i></p> <p><i>How would you feel after they put your favorite or vegetable on the lunch menu?</i></p>	<p>I think they might ask why. Need to give them opinion or fact of why you want more mangoes; happy and overwhelmed because my favorite fruit is on the menu and I'd think to myself "I gotta eat it"</p>	<p>Maybe, heading to yes because they are nice people but I have my doubt; feel happy</p>	<p>I think they would say "no" because there are 700 people in the school and they would have to say yes to everyone. Persuasion would help. I could write a paper about all the good things about peppers; I'd feel accomplished because I was able to persuade them to do it</p>	<p>"Maybe, I'll try"; I'd feel good</p>	<p>Maybe to no because the adult needs persuasion on why they should listen to the student's suggestion (like writing a paper about the benefits of their favorite FV)- there are a lot of people at school and student feels a though lunch lady would have to say yes to everyone</p> <p>Students would feel happy and overwhelmed if adult listened to them and put FV on menu. Overwhelmed because the student will have to eat it since they asked for it</p>

How comfortable do you feel about asking them to put it on the menu? (see chart)	Ms. Debbie is a very nice woman and she'll try her best. My mom would persuade me to, she always is encouraging me to be my best and stand up for myself; GROUP- because I can get nervous and they will help me out	I get nervous sometimes and say I'd do it but then I don't; GROUP- less scared because if something happens to you, happens to everyone else too	Not comfortable asking adults like that; GROUP- don't like doing anything alone and with a group they wouldn't let me back out	I would want to do it but when I want to ask I'd start laughing because I'd be nervous; GROUP- because not by myself	25-100% They said were comfortable But not comfortable because they are nervous. One said below 50% As a group- 100% because they're less scared/nervous, and they have support
Favorite FV at home?	Asparagus, mango	Apples, pineapples (when mom goes shopping)	Pear	Peas, mango	All mention a favorite fruit or vegetable
FV you wish you had more of?	Peaches	Pineapple	Bananas, to add to cereal	Peaches	All wished for a favorite food
Adult at home you would talk to, to get more FV?	Mom, dad	Mom, dad	Step mom, only person he lives with	Both parents. Both do shopping	All would ask relatives
What would you say to me? Would they listen to your suggestion?	"can we please get peaches more often because I like eating peaches?" ; maybe because sometimes we don't have a lot of	"Ma, next time you go to the store, can you please get pineapples, apples, and pears because I like those things and so does my	"Anna, next time you go shopping can you get more bananas to add to my cereal?"; so/so depending on mood. In a good	"Can you get more peaches?" All the time (all go shopping with family- always go)	All would know what to say Most thought adult would listen to request. Going food shopping with adult helps them get

	food at home often yes because we don't have fruits at home; go shopping with family-most of the time go with her. Sometimes I get FV I want.	sister and brother" Go shopping with family usually, on the weekends. Gets me more FV when with her	mood, she'd probably have Josh (brother) go; (goes shopping with family. I almost always go shopping with brother because he likes my company and she gives me money to buy food)		the FV they want.
Do you feel comfortable asking adult to buy FV this week?		They're our parents; It's not someone I don't know, I've known her (mom) for 10 years	I do a lot and she usually nice so she usually would		95-100% comfortable asking adult at home because they have a comfortable relationship with them and they're nice.
How do you feel if you had asked them to buy a FV this week and they bought it for you and fam?	Happy and say thank you Mom and dad	Hug mom non-stop and thank her	Feel happy and say thanks	Feel happy and say thanks, and eat it	Students would all be thankful and happy; Felt happy when they said it
Prepare fruits and veg?	Everything because my mom gets busy doing something else. I have to do them.	Wash them and take off sticker	Usually cut because I am good at cutting; if home when cooking is happening	Everything - wash, cut, cook, when mom and dad cook; sometimes	All have prepared food before Some independently prepared food

	Do it when mom and dad are cooking			do it myself; love cooking	when adults are cooking
Questions or comments?					

MATRIX 2: Post-Intervention

Who can tell me an adult at school you would talk to, to get more of your favorite fruit or vegetable at home?

- *All would know who to ask. Either lunch lady, principal, teacher*

What would you say to me?

- *Almost all would know what to say to an adult*
- *Some would ask for their favorite fruits or vegetables on specific days, meals, and would ask politely*
- *When students knew what to say, they seemed confident in asking for FV*
- *They used techniques such as using surveys for students to vote on their favorite FV*
- *Some used knowledge of an adult at school having to ask Sodexo to get FV for the school*

What do you think would happen if you asked an adult to put your favorite fruit or vegetable on the menu?

- *Almost all students think that adult would either listen to their suggestion or try their best to put their favorite FV on the menu*
- *Some did not think so (maybe not/not listen to their suggestion) because if there are lots of people asking, and lunch lady cannot please everyone*
- *One thinks that adults would have two items for kids to vote on to put on the menu*

How comfortable do you feel about asking them to put it on the menu?

- *Students ranged from a 25-100%. Most students were above 50% confident*
- *Comfortable because they know them*
- *Not comfortable because they are nervous or shy*
- *If they ask adult as a group, then they are 80-100% comfortable because they would be less scared or nervous and they have support*

Adult at home you would talk to, to get more FV?

- *All would ask relatives at home*

What would you say to me?

- *All would know what to say to adult*
- *Most find it helpful when they help them grocery shop*
- *Some would use manners when asking*

Would they listen to your suggestion?

- *Most think adults will get them what they want*
- *Reasons they won't listen to their suggestions: busy, not enough money*
- *Most say that it helps to go to the store with them- adults will get what they want*

How comfortable do you feel asking adult to buy FV this week? (scale)

- *75-100% comfortable*
- *Reasons they are not comfortable: money is a barrier, adult may be busy*
- *Reasons they're comfortable: "they are family," trust them, they eat healthy, have comfortable relationship with them*

How do you feel if you asked them to buy a FV this week and they bought it for you and fam?

- *A majority were excited, happy, thankful (kids were overall excited and happy then they said it*
- *One group was surprised because adults do not usually buy what child specifically likes*

Prepare fruits and vegetables

- *Most students have helped prepare food in the past*
- *Some describe making specific food*
- *Some have helped make a SNAP-Ed recipe*
- *Cut, chop, cook, peel, wash, season it*
- *Some expressed they like cooking*

SNAP-Ed Comment

- *Students liked trying SNAP-ed recipes and voting, learning about how colors of fruit help your body, seeing a student's recipe on the salad bar, tasting new food or a new preparation of a FV, making posters and rhymes, interacting with students in the cafeteria*

Students overall seemed very animated when talking about the program

FINAL THEME: Post-Focus Groups

1. Outcome Expectations

School: Students had positive and negative outcome expectations as a result of asking for their favorite FV's. Some were confident that their suggestion would work because they had an idea on where adults at school get their food-- used knowledge of an adult at school having to ask Sodexo to get FV for the school.

Positive Outcome Expectations:

- *"It will probably happen."*
- *"It would work! They would put it on, but it might take a few days."*
- *"It would work! They would like it and talk about it. Find 2 recipes and pick our favorite to add to the salad bar."*
- *"She is going to say yes."*
- *"Probably see it the next day"*
- *"Yes she would get it. I think the kids would go to the salad bar more. Would say thank you"*
- *"She would contact the delivery people, Sodexo, to put fruits and vegetables on the menu more often."*
- *"It would work! Yes, the principal will ask Sodexo to serve what we like. She wants us happy and she's nice. They will ask people what they like, like what we did with the Spring Roll Salad and Lasagna, have a poll."*
- *"Would say she can add it more often, but not every day. She would have to ask Sodexo to get more mangoes to add to the schools. Would probably take a week or so because have to pick the mango and get them all to the elementary schools."*
- *"I think she would ask Sodexo if they can bring it and probably the next day it would be there."*

Negative Outcome Expectations:

- *" 'I don't know hunnie.' I'm slightly sure they would say no "*
- *"Don't think they would"*
- *"I think they would say 'no' because there are 700 people in the school and they would have to say yes to everyone. Persuasion would help. I could write a paper about all the good things about peppers. I'd feel accomplished because I was able to persuade them to do it."*

Home: Students had positive and negative outcome expectations as a result of asking for their favorite FV's.

Positive Outcome Expectations:

- *"They will say yes. If they don't get it that day, they will get next time."*
- *"My mom says yes to fruits and vegetables"*
- *"She likes me to eat healthy if I ask she'll get it."*
- *"They always say yes. They like when we ask for healthy foods."*

Negative Outcome Expectations:

- *"He would think about it. We don't get that many food stamps because my parents are married."*
- *"May not have enough money for it and may need to get something else with money."*
- *"Sometimes, depends on if they've spent the money for the month."*

2. Self-Efficacy in Asking for FV

School: Children were able to express their relationship status with an adult at school whom they would talk to get their favorite FV in the school food environment. This drove children to feeling comfortable to not comfortable in asking adult at school to put their favorite FV on the menu this week. The range of comfortability (based on a scale) was between 25-100%, but almost all were above 50% comfortability despite some barriers. Asking as a group, children were 95-100% comfortable asking adult for their favorite fruits and vegetables on the menu because they would have received support from others.

Relationship with Adult

Feels comfortable

- [85% comfortable on scale]- “I’m kind of not comfortable, in case she says no. But I think yes because she’s nice.”
- [90 % comfortable on scale]- “not shy to grown-ups I already know”
- [100% comfortable on scale]- Very comfortable because I’ve known them for a long time, we have a good relationship with them. It’s for the school, a good environment.”
- [100% comfortable on scale]- “Lunch lady is a very nice woman and she’ll try her best. My mom would persuade me to, she always is encouraging me to be my best and stand up for myself”

Don’t feel comfortable

- [25% comfortable on scale]- “because I haven’t been here for years and years. First year here”
- [25% comfortable on scale]- “not comfortable asking adults like that.”

Support from friends

- [Asking as a group- They were 100% comfortable]-
 - “As a group they’ll talk as well. If she had a question and you don’t have the answer your friends can answer. You’re with friends so not shy”
- [Asking as a group- They were 100% comfortable]-
 - “More comfortable because you have your friends to be with you so you don’t have to be scared or nervous. If by yourself, would be more scared to ask”
- [Asking as a group- They were 95% comfortable]-
 - “Don’t like doing anything alone and with a group they wouldn’t let me back out.”
 - “Less scared because if something happens to you, happens to everyone else too.”
 - “Because I can get nervous and they will help me out”

Home: Because almost all students had positive relationships with the adult at home, this drove children to feeling comfortable in asking adult at home to buy their favorite FV

[100%]. Only one was sometimes comfortable asking adult at home for their favorite fruits and vegetables.

Feels comfortable

- *[100% comfortable with asking relative at home] “Because she is my mom. I trust her. My mom doesn’t eat junk food she heats healthy foods and drinks water. She buys her groceries at Whole Foods.”*
- *[100% comfortable with asking relative at home]. “Mom likes eating healthy”*
- *[100% comfortable with asking relative at home]. I feel comfortable asking my mom because I know her attitude and how she’ll respond,*
- *[100% comfortable with asking relative at home] “because they’re family”*
- *[100% comfortable with asking relative at home] “They’re our parents. It’s not someone I don’t know. I’ve known her for 10 years.”*

Sometimes comfortable

- *[50% comfortable] “Sometimes comfortable. May yell at you if waiting for money to come in.”*

3. Strategies

School: At school, most would ask adult ranging from very specific requests (specific days, meals, area to put FV) to general. Only a few students asked in a general way (not specifying FV, meal, etc). Only 1 student could not answer question.

Specific

- *“Could you please add plums to the menu?”*
- *“Could we take a survey of the school to see what fruits or vegetables they want to see on the menu? Can they put those fruits or vegetables on the menu?”*
- *“Please tell the principal to tell Sodexo to put fruits and vegetables on the salad bar?”*
- *“I was thinking of bringing new fruits to the cafeteria to see if people like it. They can vote on them. Would you help?”*
- *“Can you add mango, pineapple, and kiwi to the salad bar or to a fruit cup?.. Yes it will work.”*

General

- *“Can you add more fruits and vegetables to the menu?”*
- *“May you please add something to the menu if you could?”*
- *“Can you put more mangoes?”*

Did not know what to say

- *“This question is too hard.”*

Home: All children knew what to ask. Children would either ask adult to go to the store to get their favorite FV or ask to go to the store with adult to get FV. They said going to the store with them will get them what they want.

- “Mom, I like strawberries, when you have a chance, can you go buy some?”
- “Mom, can you go buy watermelon because we don’t get it often?”
- “Hey mom, can I have more fruits and vegetables to get much healthier.”
- “Mom/grandma, when you go shopping, can you get these fruits and vegetables?”
- “If you have any extra money, would you buy us more pineapples, vegetables, healthy snacks for us?”
- “Hey dad, can you try to get some more watermelon if you have leftover money?”
- “Ma, next time you go to the store, can you please get pineapples, apples, and pears because I like those things and so does my sister and brother.”

Shopping with Parent

- “When I shop with them I get what I want”
- “I would use my manners. I help my dad choose the less expensive foods. When I shop with them I get what I want and can make more smoothies and salads.”
- *“Not often, grandma, grandpa, dad works so sometimes would get it for me. Helps to go with them to the store.”*
- *“Go shopping with family usually on the weekends. Gets me more FV when with her.”*

4. “I help/I don’t help” at home

Children were able to express their competencies in cooking and preparing food to not cooking and preparing at all at home. Children remembered specific times they helped adult prepare food. Only a few students have not helped with preparation.

“I help” prepare

- *“I prep bananas, bread, and peanut butter. I like to make smoothies and SNAP-Ed recipes.”*
- *“I chop tomatoes and onions for my dad to sauté.”*
- *“Me and my bother cut the stems off of the strawberries and slice veggies for soup.”*
- *“Put carrots in soup to taste better. Make ‘atun’- tuna, onions, tomatoes, and seasonings. We eat on chops or just a spoon. I help cut tomatoes.”*
- *“Sometimes I tell mom to do certain things and if she doesn’t get it, I show her how to cut the fruits and vegetables”*
- *“I made veggie lasagna at home- I like trying new things.”*
- *“[I do] everything- wash, cut, cook when mom and dad cool. Sometimes, do it myself. Love cooking”*

5. Students Take Charge!

Students happily described what they enjoyed and learned from Students Take Charge! Students learned a range of skills such as casting votes, trying new foods, interacting with students, etc.

- *“I liked seeing the kids try the recipes and vote”*
- *“Fun to see everyone try it and state their opinion”*
- *“It was fun to vote on a recipe”*
- *“I liked voting between the spring roll salad and veggie lasagna. I liked getting students to try the spring roll salad. It makes me happy to get kids to try new foods. I like that they served [student’s] recipe on the salad bar.”*
- *“I learned if I don’t like a fruit or vegetable I can add something to make it taste better. I don’t like broccoli, but my mom cooks it to make it softer and adds cheese, chicken and rice. I wish SNAP-Ed had a summer program. If they did, I would go. I made the veggie lasagna at home.”*
- *“There’s a lot of fruits and vegetables to try. Anything you don’t know if you like, you should try it. I tried Curly Kale Slaw at home.”*
- *“I loved the project because we got to try new things like veggie lasagna. I made it at home.”*
- *“I liked getting the votes. Fun to talk with everyone in the cafeteria.”*